

# **State of the Stations**

---

## **Sounder Stations Flexible Access Study**

### **Phase 2: Data Collection**

Prepared by the URS Team

September 2011

## Table of Contents

Why are we conducting this planning study?.....	2
What will you find in this report? .....	4
How have we reached the community? .....	4
What is the state of each Sounder station? .....	6
Mukilteo .....	8
Kent .....	15
Auburn .....	23
Sumner .....	30
Puyallup.....	37
Tacoma Dome .....	44
South Tacoma .....	52
Lakewood .....	56

## Appendices

Appendix A – Acronyms

Appendix B – Sounder/Express Rider Survey

Appendix C – Public Outreach and Open House Summary

Appendix D – Traffic Counts

Appendix E – References

Appendix F – Preparers and Reviewers

## Why are we conducting this planning study?

In November 1996, voters approved the Sound Transit (ST) *Sound Move* (Sound Transit 1996) funding package, a comprehensive regional transit plan that comprises nearly 100 separate but interrelated capital and service projects. This plan includes a mix of transportation improvements such as high-occupancy vehicle lane access improvements, ST Express bus routes, Sounder commuter rail, and Link light rail. The ST Sounder Commuter Rail service runs 82 miles from Everett to Tacoma/Lakewood. Sounder service between Seattle and Tacoma started in 2000. Service between Everett and Seattle began in 2003. Nearly 4,500 commuters use this service daily during the peak commute times and it is anticipated that this number will continue to grow.

In November 2008, voters approved ST2, which provides immediate and long-term funding for significant express bus growth as well as launching major light rail, commuter rail, and station access expansions. A map showing ST2 Regional Transit System Plan improvements is included as Figure 1. Part of the funding package is targeted to improve access to the regional transit system at eight Sounder Commuter Rail stations: Mukilteo, Kent, Auburn, Sumner, Puyallup, Tacoma Dome, South Tacoma, and Lakewood. Sounder ridership growth has continued over the last 10 years since Sounder service began. The desire for investment in station access has been expressed by riders, local jurisdictions, and the community. Concerns include:

- Parking lots that operate at or above capacity
- Impacts on local streets and downtowns
- Reduce greenhouse gas emissions by encouraging walking, biking, transit connection, and carpooling to Sounder stations

As a response to these changes and inquiries, ST is ready to advance the concept of flexible station access solutions. This approach will be implemented through this Sounder Stations Flexible Access Planning Study, which will address how much demand can be accommodated by modes other than by autos parking at the stations, which will also result in an estimate of additional parking demand.



Figure 1: Sound Transit Regional Transit System Plan Map

## What will you find in this report?

The Sounder Stations Flexible Access Planning Study consists of seven phases:

- Phase 1 – Project Management Plan (complete)
- Phase 2 – Inventory of Existing Conditions/Data Collection (included in this report)
- Phase 3 – Station Access Demand Study (upcoming)
- Phase 4 – Define Evaluation Criteria (initiated)
- Phase 5 – Alternatives Analysis (future)
- Phase 6 – Station Access Improvements Plan (future)
- Phase 7 – Support Staff Recommendation (future)

This report contains the products of Phase 2. The first of these is the review of existing plans and policy documents, including:

- ST2 Plan
- ST2: A Mass Transit Guide
- ST Parking Pricing Study
- Origin-destination information
- ST 2009 Fare Payment Survey
- Local jurisdiction's comprehensive plans, zoning ordinances, downtown plans, transportation and non-motorized plans, and corridor plans or studies

Other Phase 2 components include data collection for each station, rider surveys, and public outreach through a series of open houses and stakeholder meetings. Through these efforts, the report describes the existing conditions or the “state” of each Sounder Station, and the issues or opportunities at each Sounder Station. A pedestrian and bicycle assessment and a public open house summary are also included.

## How have we reached the community?

Beginning in 2010, Sound Transit reached out to the city governments in the cities where the stations in this study are located. Sound Transit staff met with local staff and elected officials to brief them on the study. Sound Transit reviewed the scope of the study, the schedule and the opportunities for public input with staff and elected officials from each of the host cities.

In addition, Sound Transit staff have attended various regional group meetings, such as the Valley Mayors group and the South County Area Transportation Board, to brief elected officials on the study.

Throughout the course of our work Sound Transit will continue to provide briefings and respond to requests for information on the Flexible Access Study.

Sound Transit and URS hosted a series of public open house events to secure feedback to help inform possible future investments by Sound Transit at eight of its Sounder Commuter Rail stations. The objectives of the open houses were to generate awareness, encourage public participation, and generate feedback. A total of six open houses were held in the following cities:

- Kent – Wednesday, January 26
- Auburn – Thursday, January 27
- Sumner – Wednesday, January 19
- Puyallup – Thursday, January 20
- Tacoma – Tuesday, January 18
- Lakewood – Tuesday, January 25

The format of the Open House events featured six information stations staffed by Sound Transit, URS or Transpo Group employees.

- Station One: Basic information about Sound Transit; funding, routes, ridership, budget and future area investments
- Station Two: Overview about the Access Study and its goals, desired outcomes and timelines
- Station Three: An aerial map with information about the existing conditions at each station and opportunity to discuss potential improvements
- Station Four: Collect feedback about how people travel to the stations
- Station Five: Provide a variety of opportunities to engage and garner comment
- Station Six: Bike Station and other third-party/partner organizations (Pierce County Metro, etc.)

Refer to Appendix C – Public Outreach and Open House Summary for more information.

## What is the state of each Sounder station?

This section presents information for each of the eight Sounder stations analyzed in this study, in order from north (Mukilteo) to south (Lakewood). The state of each station is reported in terms of a brief inventory of the facility, transit connections, the local jurisdiction's relevant goals and policies for the station area, mode splits, rider surveys, field observations, proposed future developments in the vicinity of the station, and detailed traffic counts.

For the most part, stations are considered separately in this report in terms of their access-related data, challenges, and improvement plans—there are no comparisons drawn between stations.

Morning trains are described in detail as those were observed in the field and from which rider surveys were collected. In the afternoon Sounder provides seven southbound trains from Seattle to Tacoma and two reverse direction trains departing from 3:15 to 6:15 p.m. There are four northbound trains from Seattle to Everett in the afternoons departing from 4:05 to 5:35 p.m.

**Everett to Seattle schedule (weekdays only)**

		Southbound			
		<u>Everett Station</u>	<u>Mukilteo Station</u>	<u>Edmonds Station</u>	<u>Seattle</u>
Train #					
Sounder	1701	5:45 a.m.	5:56 a.m.	6:11 a.m.	6:44 a.m.
Sounder	1703	6:15 a.m.	6:26 a.m.	6:41 a.m.	7:14 a.m.
Sounder	1705	6:45 a.m.	6:56 a.m.	7:11 a.m.	7:44 a.m.
Sounder	1707	7:15 a.m.	7:26 a.m.	7:41 a.m.	8:14 a.m.
<u>Amtrak*</u>	513	10:02 a.m.	:	10:27 a.m.	11:05 a.m.
<u>Amtrak*</u>	517	8:59 p.m.	:	9:24 p.m.	10:10 p.m.

**Seattle to Everett schedule (weekdays only)**

		Northbound			
		<u>Seattle</u>	<u>Edmonds Station</u>	<u>Mukilteo Station</u>	<u>Everett Station</u>
Train #					
<u>Amtrak*</u>	510	7:40 a.m.	8:07 a.m.	:	8:31 a.m.
Sounder	1700	4:05 p.m.	4:32 p.m.	4:47 p.m.	5:04 p.m.
Sounder	1702	4:33 p.m.	5:00 p.m.	5:15 p.m.	5:32 p.m.
Sounder	1704	5:05 p.m.	5:32 p.m.	5:47 p.m.	6:04 p.m.
Sounder	1706	5:35 p.m.	6:02 p.m.	6:17 p.m.	6:34 p.m.
<u>Amtrak*</u>	516	6:50 p.m.	7:17 p.m.	:	7:42 p.m.

#### Tacoma to Seattle schedule (weekdays only)

Northbound							
Train #	<u>Tacoma</u>	<u>Puyallup Station</u>	<u>Sumner Station</u>	<u>Auburn Station</u>	<u>Kent Station</u>	<u>Tukwila Station</u>	<u>Seattle</u>
1500	4:55 a.m.	5:07 a.m.	5:12 a.m.	5:20 a.m.	5:27 a.m.	5:34 a.m.	5:54 a.m.
1502	5:35 a.m.	5:47 a.m.	5:52 a.m.	6:01 a.m.	6:08 a.m.	6:15 a.m.	6:34 a.m.
1504	6:00 a.m.	6:12 a.m.	6:17 a.m.	6:26 a.m.	6:33 a.m.	6:40 a.m.	6:59 a.m.
1506	6:25 a.m.	6:37 a.m.	6:42 a.m.	6:51 a.m.	6:58 a.m.	7:05 a.m.	7:24 a.m.
1508	6:50 a.m.	7:02 a.m.	7:07 a.m.	7:16 a.m.	7:23 a.m.	7:30 a.m.	7:49 a.m.
1510	7:20 a.m.	7:32 a.m.	7:37 a.m.	7:45 a.m.	7:52 a.m.	7:59 a.m.	8:19 a.m.
1512	8:00 a.m.	8:12 a.m.	8:17 a.m.	8:25 a.m.	8:32 a.m.	8:39 a.m.	8:59 a.m.
1514	4:25 p.m.	4:37 p.m.	4:42 p.m.	4:50 p.m.	4:57 p.m.	5:04 p.m.	5:23 p.m.
1516	5:00 p.m.	5:12 p.m.	5:17 p.m.	5:25 p.m.	5:32 p.m.	5:39 p.m.	5:58 p.m.

#### Seattle to Tacoma schedule (weekdays only)

Southbound							
Train #	<u>Seattle</u>	<u>Tukwila Station</u>	<u>Kent Station</u>	<u>Auburn Station</u>	<u>Sumner Station</u>	<u>Puyallup Station</u>	<u>Tacoma</u>
1501	6:10 a.m.	6:22 a.m.	6:29 a.m.	6:36 a.m.	6:45 a.m.	6:49 a.m.	7:08 a.m.
1503	6:50 a.m.	7:02 a.m.	7:09 a.m.	7:16 a.m.	7:25 a.m.	7:29 a.m.	7:48 a.m.
1505	3:15 p.m.	3:27 p.m.	3:34 p.m.	3:41 p.m.	3:50 p.m.	3:54 p.m.	4:14 p.m.
1507	3:50 p.m.	4:02 p.m.	4:09 p.m.	4:16 p.m.	4:25 p.m.	4:29 p.m.	4:49 p.m.
1509	4:20 p.m.	4:32 p.m.	4:39 p.m.	4:46 p.m.	4:56 p.m.	5:00 p.m.	5:19 p.m.
1511	4:45 p.m.	4:57 p.m.	5:04 p.m.	5:11 p.m.	5:21 p.m.	5:25 p.m.	5:44 p.m.
1513	5:12 p.m.	5:24 p.m.	5:31 p.m.	5:38 p.m.	5:48 p.m.	5:52 p.m.	6:11 p.m.
1515	5:40 p.m.	5:52 p.m.	5:59 p.m.	6:06 p.m.	6:16 p.m.	6:20 p.m.	6:39 p.m.
1517	6:15 p.m.	6:27 p.m.	6:34 p.m.	6:41 p.m.	6:50 p.m.	6:54 p.m.	7:14 p.m.

Sounder has two bicycle tie-downs per car and two additional bikes are allowed on each car and must be held in place securely by the cyclist. It is assumed per Sound Transit policy that four bicycles are allowed on each of the cars per train, for a total of 28 bicycles per southbound train trip (seven cars), and a total of 12 bicycles per northbound train trip (four cars).

All maps and aerial photographs presented in this section are oriented such that north is at the top of the figure.



## **Mukilteo**

The Mukilteo Sounder Station is located near the waterfront and ferry terminal, and is designed to serve riders coming from the local area in and around Mukilteo and the Mukilteo-Clinton ferry.

Sounder trains depart each weekday morning from Mukilteo southbound to Seattle at 5:56, 6:26, 6:56, and 7:26 a.m. Figure 2 shows the location of the Mukilteo Station with an aerial view of the station.

There are 68 surface parking stalls and currently no bike racks or lockers are available.

### **Transit Connections**

The Mukilteo Station is also served by Community Transit (CT) local and regional routes and a local Everett Transit route. The ferry system and Island Transit on Whidbey Island provide opportunities for inter-modal travel through this station. All of these connections are located at the ferry terminal, approximately 820 feet northwest of the station.

CT Route 113 provides service between Mukilteo and Lynnwood with all-day service, approximately every 20 minutes in both directions. This route provides reasonable access to Sounder, particularly on the northern end of the route, for example, from the Harbor Point area and north to the ferry terminal. There are transfer connections for all four p.m. Sounder trips and two of the a.m. trips. In the a.m., the bus arrives 13 minutes before the second train, 18 minutes before the third train, and 10 minutes before the fourth train. In the p.m., the bus is scheduled to depart eight minutes after the arrival of the train.

CT Route 417 provides peak period, peak direction service between the Mukilteo ferry terminal and downtown Seattle. It competes with Sounder. Route 417's scheduled travel times are almost 20 minutes longer than Sounder (48 minutes) to the south end of downtown Seattle but similar to the north end of the downtown.

Island Transit Route 1 provides all-day, bi-directional service on Whidbey Island between Oak Harbor and the Clinton ferry dock. There are six a.m. and six p.m. trips during peak commute times and service every 60 minutes midday that has "at the boat" loading on the dock. Whidbey Island has fairly robust transit, carpool and vanpool usage making this a potentially significant market although it is outside of the Puget Sound Regional Transit Authority district.

Everett Transit Route 70 and CT Routes 190 and 880/885 provide peak period only service that is oriented away from Mukilteo in the a.m. and to Mukilteo in the p.m. and therefore have limited potential for transfers to and from Sounder.



**Figure 2: Mukilteo Station (920 1st Street)**

## Jurisdiction Goals and Policies

The Mukilteo Station is designated as Commercial with a Mixed Use Overlay by the City's Comprehensive Plan and is zoned Waterfront Mixed Use.

***Mukilteo Comprehensive Plan.*** Mukilteo revised its Comprehensive Plan in 2009. The original plan was adopted in 1986 and amended in 1995 to address Growth Management Act (GMA) requirements (City of Mukilteo 2010). The Mukilteo Commuter Rail Station is located on the Burlington Northern Santa Fe (BNSF) Railway mainline along the Puget Sound shoreline. The City adopted its plan in 2000 with specific designs for the shoreline area as a waterfront mixed use zoning district and is expecting re-development of the waterfront area within the next 10 years, anchored by a multi-modal transportation terminal for ferry, bus, and commuter rail riders.

The commuter rail station is an integral piece of the multi-modal transportation terminal. The first phase of construction on the commuter rail station has been completed by Sound Transit. Washington State Ferries is preparing a draft Environmental Impact Statement (EIS) on three options to improve or relocate the ferry terminal.

Specific Comprehensive Plan policies that support inter-modal connectivity to Mukilteo's waterfront site and multi-modal terminal include:

- *GD2: Encourage City entryways, commercial development, and redevelopment near the urban waterfront to reflect the waterfront atmosphere of the City.*
- *GD5: Provide public infrastructure and services which are cost-effective, efficient, and sensitive to the environment; and which balance the use of private vehicles, cars/vanpools, public transit and non-motorized modes of transportation, including a comprehensive system of bicycle and pedestrian routes, for the movement of people and goods.*
- *TR2: Concepts within the March 1995 Mukilteo Multimodal/Inter-Modal Terminal and Access Study and the Programmatic Environmental Impact Statement (EIS) prepared by the City of Mukilteo and the Central Waterfront Alternative or any amended master plan adopted by the Mukilteo City Council should be used as the basis for all planning activities related to the proposed Multimodal/Inter-Modal Terminal in downtown Mukilteo. The City should aggressively pursue an alternative route to replace Mukilteo Speedway as the primary vehicular access to the Mukilteo waterfront and the Washington State Ferries terminal in a cooperative effort with WSDOT [Washington State Department of Transportation] and the City of Everett.*
- *TR3: Development of the Multimodal/Intermodal terminal and redevelopment of the Tank Farm site, should employ the following urban design techniques: a network of public paths, a waterfront promenade, a chain of waterfront parks, recreational*

*opportunities such as a new marina or visitor dock and boat launch, new mixed use/commercial opportunities, public amenities downtown (e.g. benches, street lights, water fountains, etc.), and pedestrian oriented streetscapes.*

- *TR4: Design of the Multimodal/Intermodal terminal shall remove ferry parking and queuing lanes from SR 525 and shall encourage the use of public transit, high occupancy vehicles (HOV), and pedestrian and bicycle access over private automobile access. The waterfront shall be preserved to the maximum extent possible for development and uses that take advantage of and benefit from being located on the waterfront and which improve on the positive characteristics of the waterfront. Surface parking lots are not such a use and shall be minimized.*
- *TR23: Convenient and secure bicycle parking should be provided in activity and transportation centers to accommodate Multimodal/Inter-Modal connections.*

**Mukilteo Downtown Business District Subarea Plan.** The Downtown Business District Subarea Plan was adopted in 2009 (City of Mukilteo 2009). Specific non-motorized projects identified in the Mukilteo Plan include:

- *REC-11: Construct a footbridge between Mukilteo Lane and the waterfront at Park Avenue or Loveland Avenue. A bridge from Old Town to the waterfront was a high priority among work session participants. While this is an expensive project, such a bridge might be coordinated with redevelopment and transit improvements on the waterfront.*

**Mukilteo Bicycle, Pedestrian and Trails Plan.** The Mukilteo Bicycle, Pedestrian and Trails Plan was adopted in 2009 (City of Mukilteo 2008). Specific non-motorized projects identified in the Mukilteo Plan include:

- Waterfront Promenade Multipurpose Trail, Lighthouse Park to Tank Farm
- Waterfront Pedestrian Bridge from 2nd Street to waterfront (same as REC-11 above)

**Mukilteo Waterfront Redevelopment.** In 1995, the City of Mukilteo City Council adopted the Multimodal/Intermodal Terminal and Access Study developed by an interagency committee charged with addressing the growing needs of the Washington State Ferry System, the proposed Sound Transit commuter rail station and the surplus of the U.S. Air Force Tank Farm property (City of Mukilteo 1995). The study provided land for:

- Expansion and relocation of the State Ferry terminal, increasing capacity for ferry loading and moving it off of State Route (SR) 525
- Placement of a commuter rail platform and a 120-vehicle park-and-ride lot (which was lowered to 80 spaces when the waterfront mixed use zoning was adopted in 2000, unless parking is provided in a garage or a lot that can be used for shared parking)

- Transfer of passengers from other modes, such as bus, taxi, van pool or drop-off
- A multimodal/intermodal station that allows passengers to transfer modes easily by separating vehicles and pedestrians through the use of a second story walkway system
- A marina/visitor moorage, boat launch, and associated parking and services
- Reclaiming public access to the waterfront through a series of parks connected by a pedestrian promenade that will form a mile-long loop trail when the Tank Farm site is connected with the Mukilteo Lighthouse Park, and which also sets aside 20% of the redeveloped area as open space
- Redevelopment of Front Street into a pedestrian-oriented waterfront commercial area that emphasizes water-enjoyment activities and allows for mixed use on the south side of Front Street (outside the 200-foot shoreline jurisdiction) where views will not be obstructed

***Future Pedestrian and Bicycle Access to Multimodal/Intermodal Terminal.*** Sound Transit has constructed Phase I of a new commuter rail platform near the central waterfront intermodal site. This project was evaluated and defined in the 1999 Draft and Final EIS for the Everett-Seattle Commuter Rail Project by Sound Transit and the U.S. Department of Transportation, Federal Transit Administration. The completed facility will consist of two platforms servicing travel both toward Everett and Seattle, a pedestrian bridge over the tracks connecting the platforms, and associated parking. Phase II to complete the facility will be completed as soon as an agreement is reached for use of a portion of the Tank Farm site.

Currently, proposed access to the terminal site will be made from the existing SR 525 starting where it crosses over the BNSF railroad tracks. The multimodal/intermodal terminal project will be designed to allow for future access from an alternate waterfront route when this new roadway is constructed. The Comprehensive Plan further acknowledges that the SR 525 street bridge is the responsibility of Washington State Department of Transportation just south of the Mukilteo ferry terminal and that the bridge is functionally obsolete, does not have adequate facilities for bicyclists and pedestrians, and needs to be replaced (although funding at the state level has not yet been made available).

***Commute Trip Reduction.*** Under Washington State law (the Commute Trip Reduction Efficiency Act of 2006), the City is required to administer a commute trip reduction (CTR) program for all employers in Mukilteo with at least 100 employees arriving at a single location during the peak morning commute hours. The goal of CTR is to reduce the number of single-occupancy vehicles traveling during the peak commute hours. CTR incentives include providing transit subsidies, preferential parking for carpools, bicycle lockers and showering facilities, and flexible work schedules.



Specific Mukilteo Comprehensive Plan policies that support commute trip reduction measures include:

- *TR29: The City of Mukilteo should support Community Transit with the adoption of a Commute Trip Reduction Plan for major employers in the city and shall coordinate and work cooperatively with Community Transit, Everett Transit, Snohomish County and other cities in the Southwest Urban Growth Area to implement the Commute Trip Reduction Plans.*

## Origin and Destination

Thirty of the passengers surveyed who boarded at Mukilteo Station one morning during the first week of November 2010 returned surveys. Table 1 shows the city of origin for the passengers surveyed. Of these 30 passengers, the majority alighted at King Street Station (80%).

**Table 1: Mukilteo Passenger City of Origin**

City	Boardings	% of Boardings
Clinton	4	13
Everett	7	23
Langley	4	13
Mukilteo	12	40
Other	3	10
<b>TOTAL</b>	<b>30</b>	<b>100</b>

## Station Area Access Mode

Arrival mode information was gathered by direct observation at the station on the morning of November 2, 2010 from approximately 4:30 to 7:30 a.m., when the last train left the station. A total of 109 arriving passengers were observed. Table 2 summarizes the station arrival mode split data.

**Table 2: Mukilteo Arrival Access Mode**

Mode	Arrivals	% of Arrivals
Auto	57	52.3
Bus	0	0.0
Bicycle	1	0.9
Drop-off	10	9.2
Walk	41	37.6
Train	0	0.0
<b>TOTAL</b>	<b>109</b>	<b>100.0</b>

Approximately half of the arriving passengers drove themselves to the station on that day. The substantial number of passengers arriving on foot at the Sounder station were observed coming directly from the Mukilteo-Clinton ferry terminal.

## Rider Survey Information

Arrival mode information was gathered by surveys completed by passengers boarding at Mukilteo Station during the first week of November 2010. A total of 30 passengers returned surveys. Table 3 summarizes the station access mode data from surveys.

Approximately one-third of the passengers who returned surveys drove themselves to the station on that day.

**Table 3: Mukilteo Sounder Access**

Mode	% of Arrivals
Drive	66
Drop-off	7
Carpool	0
Transit	24
Bike	0
Walk	0
Other/Sounder Reverse	3
<b>TOTAL</b>	<b>100</b>

## Observations in the Field

In general, arrivals were evenly spaced across the four southbound trains. The ferry and Sounder schedules generally were well-coordinated. The station parking area was about 90% full following the departure of the fourth and last southbound train.

## Traffic Counts

One intersection near the station (1st Street at the station parking entrance; see Figure 2) was counted between 6:30 and 8:30 a.m. on November 8, 2010. At this intersection the peak hour for total arriving traffic occurred between 7:25 and 8:25 a.m., when 61 vehicles entered the intersection (about one per minute), with the majority (42) turning from southbound 1st Street into the Sounder station parking/drop-off area. Volumes are very low at this intersection because three of the four legs are effectively driveways.

## Summary

- The existing connector (SR 525 bridge and corridor) does not have sufficient pedestrian and bicycle facilities and does not directly link central Mukilteo with the rail station. Travel to Everett and Seattle on Sounder is indirect for most area residents, involving back-tracking to get to the station, making more direct bus transit attractive. The amount of parking provided at the station meets current demand and thus there is little incentive to shift mode of travel.
- The pattern of evenly-spaced arrivals throughout the morning (across all modes) indicates that the Mukilteo commuter rail station park-and-ride facility has not yet reached capacity. Walking commuters mostly originate from the ferry and there is a consistent pattern of drop-off commuters.
- Enhancements to the SR 525 bridge and corridor or a new connector as indicated in Mukilteo's Comprehensive Plan may result in a rise in local walk and bike access to the station by Mukilteo residents.

## **Kent**

The Kent Sounder Station is located in the northern part of downtown Kent, between the busy east-west arterials W James Street and W Smith Street and one block west of Central Avenue, which is the primary north-south arterial in downtown Kent. It primarily serves riders who live east of the downtown area, as well as those who work near the station. The station also is a major transfer point for King County Metro bus service.

Sounder trains depart each weekday morning from Kent, northbound to Seattle at 5:27, 6:08, 6:33, 6:58, 7:23, 7:52, and 8:32 a.m., and southbound to Tacoma at 6:29 and 7:09 a.m. Figure 3 shows the location of Kent station, along with an aerial view.

There are 1,101 parking stalls (976 garage and 125 surface), eight bicycle rack spaces and 14 bicycle lockers available. The parking garage is open from 5:00 a.m. to 2:30 a.m. Monday through Friday, and from 6:00 a.m. to 2:30 a.m. on weekends and holidays.

### **Transit Connections**

The Kent Station is served by ST Express bus and seventeen King County Metro bus routes. King County Metro has moved its transit center from the Kent Park-and-Ride to Kent Station (approximately 2,640 feet/0.5 mile west of the station). Some of the King County Metro routes will be discussed as groups because they operate or are scheduled together, which has transfer implications.

ST Express Route 566 travels from Auburn Station to the Overlake Transit Center, also serving Kent Station, the Renton Transit Center and Bellevue Transit Center. Midday, southbound in the morning peak period and northbound in the afternoon peak period has service every 30 minutes. In the morning peak period there are additional northbound trips that start at Kent Station and additional southbound trips in the afternoon peak period that end at Kent Station. For these periods and directions this results in service every 15 minutes or better, with some trips just six to seven minutes apart. Transfers to and from Sounder are convenient.

King County Metro Route 150 provides all day bi-directional service every 15 minutes between Kent Station and downtown Seattle, with stops at the Kent Park-and-Ride lot, Southcenter, Tukwila Interurban Investment lot and Tukwila Park-and-Ride lot (at 13445 Interurban Avenue S). There are decent transfer times for most Sounder trips in both directions for both peak periods, with the exception of the first two northbound Sounder trips in the morning (the first southbound bus misses the second northbound Sounder trip by two minutes but this may be a limited market).



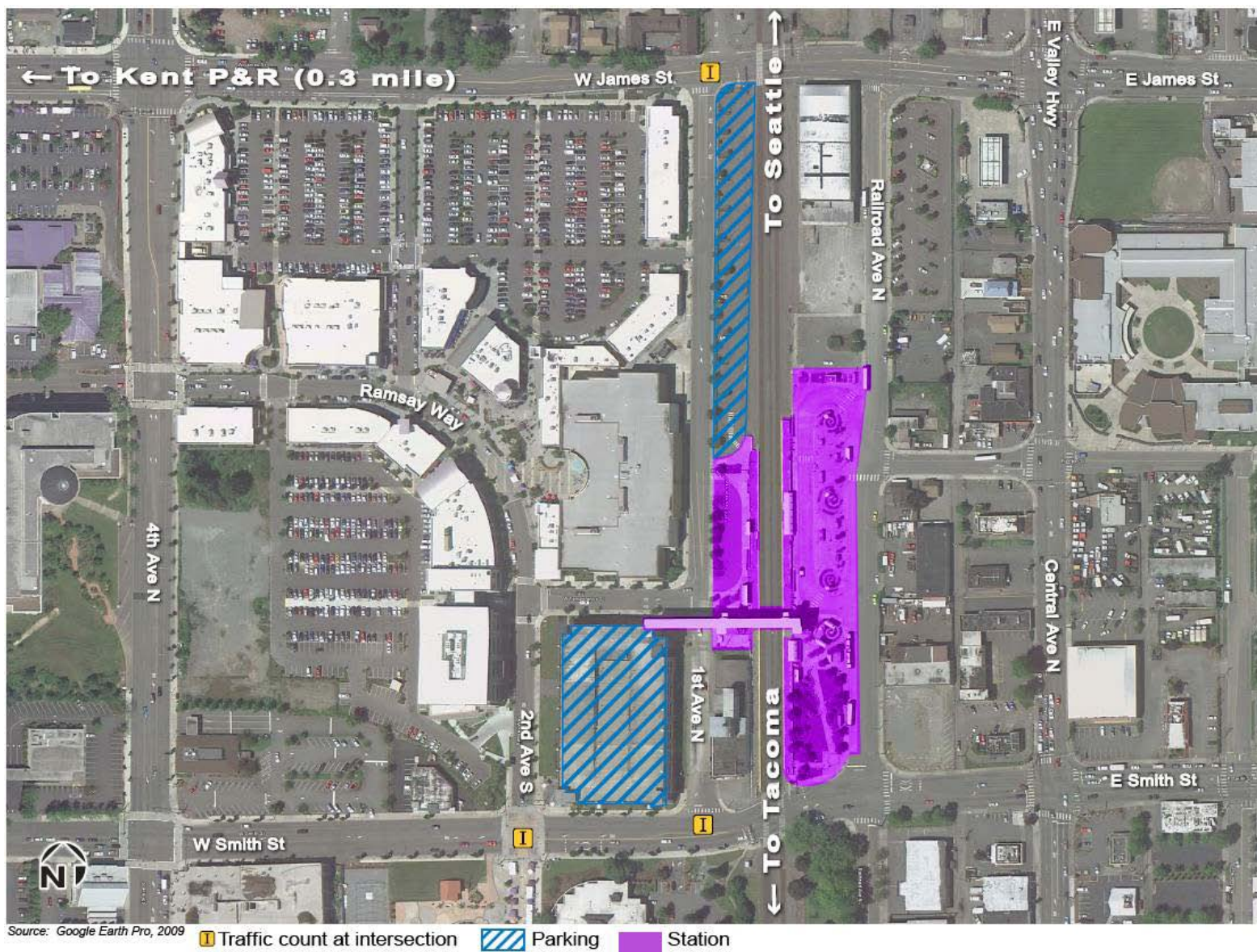


Figure 3: Kent Station (301 Railroad Avenue N)

King County Metro Route 153 connects Kent Station to the Renton Transit Center, stopping at the Renton Park-and-Ride lot, travelling mostly via E Valley Road, primarily an industrial/commercial area. Service is offered from about 6:00 a.m. to 6:00 p.m. with service every 30 minutes in the peak period and every 60 minutes midday. In the morning the northbound bus trips provide a good transfer connection from about half of the northbound Sounder trips and there are good return transfers for nearly all of the southbound Sounder trips in the afternoon.

Tukwila Station is the location for timed transfer connections between Sounder and King County Metro Route 154, which provides northbound peak period service in the morning and southbound in the afternoon between Kent Station and Federal Center South, via the Boeing (Duwamish) Industrial area. There are four a.m. and four p.m. trips.

King County Metro Routes 158/159/162 are an intra-scheduled set of routes providing service between Timberlane, Kent East Hill, downtown Kent/Kent Station and downtown Seattle via I-5. This is peak period, peak direction service only, with some trips timed to meet Sounder trips. The 162 trips operate only between Kent Station and downtown Seattle. The Sounder schedule is shown on the 158/159/162 timetable.

Another intra-scheduled group of routes are the King County Metro 164/166/168, connecting Kent Station to Green River Community College (Route 164), Highline Community College/Des Moines (Route 166) and Timberlane (Route 168) east of Kent. All have service every 30 minutes in both directions from about 5:00 a.m. to 10:00 p.m. (midnight on the 168). Among these routes there are important work and school class schedule times and the potential for good transfer connections with Sounder, which makes for a scheduling challenge. In fact, there are good transfer connections between the 168 Timberlane and Sounder.

King County Metro Route 169 operates between Kent Station and the Renton Transit Center via 104th/108th Avenues SE, all day, approximately every 30 minutes. There are good transfer connections from northbound morning Sounder trips to the 169 and good return connections in the p.m.

All day, service is provided every 30 minutes on King County Metro Route 180 between Burien and White River Junction, south of Auburn. SeaTac/Airport Link Station, Kent Station and Auburn Station are served by this route. The Burien-Kent portion of the route has good transfers to northbound Sounder trips in the morning and southbound Sounder trips in the afternoon. The portion of the route south of Auburn Station is oriented, schedule-wise, to the Auburn Station.

King County Metro Route 913 provides all day service every 30 minutes, in both directions, between Riverview (northwest Kent) and Kent Station. There are good (5-10 minute waits) connections in the morning from the bus to the northbound Sounder trips and returning in the afternoon from southbound Sounder trips to the bus, except there is no bus trip for the first morning northbound Sounder trip or the last p.m. southbound Sounder trip. For trips from

northbound Sounder to the bus in the a.m. and from the bus to southbound Sounder in the p.m., the wait times are in the 15-25 minute range.

King County Metro Routes 914 and 916 are midday local routes within Kent that do not currently provide service during the peak commute hours.

King County Metro Route 918 is a peak period only loop from Kent Station through the industrial area to the north of downtown Kent and back to Kent Station. There are six a.m. and six p.m. trips with timed transfers from and to Sounder (the last morning northbound and afternoon southbound Sounder trips do not have a corresponding bus trip).

King County Metro Route 952 is a peak period service between Auburn and Everett Boeing via SR 167 and Interstate (I-) 405 with a stop at Kent Station. There are four northbound bus trips in the a.m. and four southbound in the p.m. The bus and Sounder schedules are not compatible for transfers.

## **Jurisdiction Goals and Policies**

Kent Station is designated as Urban Center by the City's Comprehensive Plan and is zoned Downtown Commercial. The station is within the City's Regional Growth Center designated by the Puget Sound Regional Council (PSRC).

***Kent Comprehensive Plan.*** Kent revised its Comprehensive Plan in 2004. The City's first Comprehensive Plan was adopted in 1977 and was updated in 1995 to address GMA requirements (City of Kent 2004).

The Kent Downtown Plan (City of Kent 1989) was completed just prior to the passage of the GMA, and set the stage for designating the area as an Urban Center in 1995 under the GMA. Kent updated its Downtown Strategic Action Plan in 2005, which serves as a basis for developing the Urban Center and implementing the Kent Comprehensive Plan (City of Kent 2005).

The following specific public improvements and redevelopment opportunities are applicable according to the Downtown Strategic Action Plan:

- *Construct traffic and pedestrian improvements to Downtown streets as necessary to provide access.*
- *Establish Design Parameters and Review Process for Redevelopment of the Kent Station Site.*
- *Support residential development in the North Core District.*
- *Encourage mixed-use development projects in proximity to the Kent Transit Center [Park-and-Ride].*

In 2001, the City purchase of the Borden Chemical property gave the opportunity to develop at higher intensities of mixed uses in proximity to the Commuter Rail Station. The City initiated a Planned Action process for the property for development of three development scenarios within the North Core District Subarea. The City Council selected Alternative 2 (Kent Station Proposal) as the Preferred Alternative in July 2002, and groundbreaking occurred in June 2004.

The following Comprehensive Plan goals and policies address the key issues and priorities related to station oriented development:

- *Kent shall maintain the designation of its Urban Center within which Center-appropriate land uses, employment, housing infrastructure, and transit improvements shall be concentrated.*
- *The City shall develop a safe transportation network which promotes a variety of mobility options, including private automobiles, public transit, bicycling, and walking.*
- *The City shall continue to support public transit, including expanded Sounder commuter rail service. Transit service shall be focused in designated medium- and high-density centers within the City.*
- *Encourage residential development in designated medium- and high-density commercial and mixed-use areas.*
- *Ensure opportunities for affordable housing in proximity to employment, public transportation, and human services.*
- *Additional office and retail development shall be encouraged, particularly in designated centers which can be served by transit.*
- *Public infrastructure, transportation, and transit service enhancements shall be utilized to focus economic development in designated medium and high-density areas.*

Implementation policies from the Comprehensive Plan include:

- *LU-3.1: Allow and encourage mixed-use development which combines retail, office, and residential uses, or as a portion of the total mixture of uses, to provide a diverse, vibrant and well designed Urban Center.*
- *LU-4.2: Focus future public transportation investments in the Urban Center.*
- *LU-9.4: Locate housing opportunities with a variety of densities within close proximity to employment, shopping, transit, and where possible, near human and community services.*
- *LU-10.1: Allow and encourage high to medium density residential development in the Downtown and designated Activity Centers.*

- *TR-1.8: Promote land use patterns which support public transportation and ensure the development includes transit-friendly features.*
- *TR-6.1: Coordinate with BNSF Railroad, UP [Union Pacific] Railroad, Washington Utilities and Trade Commission (WUTC), and Sound Transit to ensure maximum transportation efficiency on both roads and rails.*
- *TR-7.2: Use incentives or regulations to encourage new construction to promote pedestrian and bicycle connections to schools, parks, community centers, public transit services and facilities, and neighborhoods and other services.*
- *TR-8.1: Work with regional transit providers to provide frequent, coordinated, and comprehensive public transit services and facilities in all residential and employment areas in the Kent Planning Area. (Public transit services and facilities include train service, bus service, vanpool services, vanshare services, Dial-A-Ride, Access, park and ride lots, car-sharing services, as well as marketing/promotional activities for all the above).*

**Kent Transit Master Plan.** Kent's Transit Master Plan was updated in 2007 (City of Kent 2007). The Kent Transit Master Plan recommends service improvements that provide local circulation in the City of Kent and that connect Kent residents to other regional communities. Recommendations are based on an extensive needs assessment. Capital improvements and pedestrian projects that support transit service goals are also detailed, as are transit-supportive land use policies. Specific policies promoting mode-split are included.

**Kent Transportation Master Plan.** Kent's Transportation Master Plan was completed in 2008 (City of Kent 2008). This plan outlines specific geographic areas and projects to improve pedestrian, bicycle and transit corridors and connections that directly serve the Sounder station. A prioritization of these projects is rated by mobility, safety, multimodal, environment and implementation (cost effectiveness, funding commitment and project readiness). The Non-Motorized System chapter includes an inventory of existing facilities and a needs assessment for pedestrian and bicycle access.

**Kent Bicycle Advisory Board.** In 1991, the Kent City Council adopted Resolution 1298, creating the Board. Members of the Board work with Council and staff to identify and promote bicycle access improvements.

**Commute Trip Reduction.** Kent City Code No. 6.12 (Ordinance No. 3474) implements State requirements for CTR. After eight years of the CTR law, CTR-affected companies in Kent have reduced their drive-alone rate by over 20%. Bus, vanpool, train, and carpool use is up 193%, and employees using compressed work weeks (flex time) to reduce the number of days that they drive alone to work is up 626% (City of Kent 2004).



## Origin and Destination

One hundred forty-three of the passengers who boarded at Kent Station were surveyed during the first week of November 2010. Table 4 shows the city of origin for the passengers surveyed. Of these 143 passengers, the majority alighted at King Street Station (88%) followed by Tacoma Station (5%).

**Table 4: Kent Passenger City of Origin**

City	Boardings	% of Boardings
Auburn	14	9.8
Covington	16	11.2
Kent	102	71.3
Maple Valley	5	3.5
Other	6	4.2
<b>TOTAL</b>	<b>143</b>	<b>100.0</b>

## Station Area Access Mode

Arrival mode information was gathered by direct observation at the station on the morning of November 3, 2010 from 5:00 to shortly after 8:30 a.m., when the last train was scheduled to depart. On that day, the last two trains were delayed by a blockage between Puyallup and Sumner, but station arrival mode data were tabulated based on scheduled train arrival times, not actual ones. A total of 2,047 arriving passengers were observed. Table 5 summarizes the station arrival mode data.

**Table 5: Kent Arrival Access Mode**

Mode	Arrivals	% of Arrivals
Auto	1,108	54.1
Bus	562	27.5
Bicycle	9	0.4
Drop-off	145	7.1
Walk	62	3.0
Train	161	7.9
<b>TOTAL</b>	<b>2,047</b>	<b>100.0</b>

Slightly more than half of the arriving passengers drove themselves to the Kent station on that day. A little more than a quarter of passengers arrived by bus. About eight percent of arrivals were by Sounder train.

## Rider Survey Information

Arrival mode information was gathered by surveys completed by passengers boarding at Kent Station during the first week of November 2010. A total of 143 passengers returned surveys. Table 6 summarizes the station access mode data from these surveys.

**Table 6: Kent Sounder Access**

Mode	% of Arrivals
Drive	75
Drop-off	12
Carpool	1
Transit	6
Bike	0
Walk	6
Other/Sounder Reverse	0
<b>TOTAL</b>	<b>100</b>

Approximately three-quarters of the passengers who returned surveys drove themselves to the station on that day. Six percent of passengers either used transit or walked to the station.

## Observations in the Field

As a multimodal transit center, the Kent Station has a large amount of arriving traffic that is not bound for Sounder trains. In particular, a substantial number of those arriving by bus leave the station on another bus. In addition, several of those arriving at the Kent Station on each train left the station on their bicycles. Some patrons observed arriving on foot could have parked or been dropped off out of the view of the observation team. The 871-space parking garage did not fill during the observation period. Four handicapped spaces, 33 regular spaces, and 18 vanpool-only spaces were empty at the end of the observation period.

## Traffic Counts

Three intersections (see Figure 3) were counted between 6:30 and 8:30 a.m. on November 3, 2010 (the same day station arrival mode split observations were recorded). The intersections counted are west of the station because that is where nearly all of the station parking is located.

The 1st Avenue N/W James Street intersection is unsignalized and W James Street traffic is not required to stop. Left turns are prohibited by signage and a median curb on W James Street. There are no traffic operations issues at this intersection in the morning peak hour (7:25 to 8:25 a.m.).

The 1st Avenue N/W Smith Street intersection is unsignalized and W Smith Street traffic is not required to stop. There is no south leg at this intersection, as 1st Avenue N ends at W Smith Street. There are no traffic operations issues at this intersection in the morning peak hour (7:15 to 8:15 a.m.).

The 2nd Avenue S/W Smith Street intersection is signalized, with left turn lanes on all four approaches. It is the primary station access point for station users who park in the parking garage. There are no traffic operations issues at this intersection in the morning peak hour (7:15 to 8:15 a.m.).

## Summary

- Kent is the third most popular destination for riders exiting the train in the morning in the Sounder system, and had the most passengers arrive by bus of the eight stations studied for this project.
- Kent Station is well-utilized, with its high parking capacity and robust bus transfer activity.
- The surrounding Kent Station development (the shopping mall) provides pedestrian activity 18 hours a day and multi-purpose trips. The street system is generally well-suited to facilitate growth in walk, and to a lesser extent, bicycle access to the station.

## Auburn

The Auburn Sounder Station is located in the southwestern part of downtown Auburn, just south of West Main Street, the downtown's primary east-west arterial.

Sounder trains depart each weekday morning from Auburn northbound to Seattle at 5:20, 6:01, 6:26, 6:51, 7:16, 7:45, and 8:25 a.m., and southbound to Tacoma at 6:36 and 7:16 a.m. Figure 4 shows the location and an aerial of the Auburn Station.

There are 676 garage/surface parking stalls, 24 bicycle rack spaces and 12 bicycle lockers available. The garage is open from 5:00 a.m. to 2:00 a.m. Monday through Friday, and from 6:00 a.m. to 2:00 a.m. on weekends and holidays.

### Transit Connections

Bus stops are located approximately 130 feet south of Auburn Station at 2nd Avenue SW and Transit Roadway (bus loop). ST Express Route 566 travels from Auburn Station to the Overlake Transit Center, also serving Kent Station, the Renton Transit Center and Bellevue Transit Center. At the Auburn Station this route has all day service approximately every 30 minutes in both directions. There are reasonable transfer connections at this station for a few trips but additional Route 566 trips start and end at Kent Station making it a more convenient location for most transferring passengers.

ST Express Route 578 serves the Puyallup, Sumner and Auburn Stations as the midday and evening/night extension of Sound Transit Route 577 from Federal Way to Seattle. It also provides peak period, off-peak direction (southbound in the a.m., northbound in the p.m.) service to or from Tacoma.

King County Metro Route 152 provides peak period, peak direction service from Auburn Station to downtown Seattle via I-5, with service every 30 minutes. It also stops at the Auburn and Star Lake Park-and-Ride lots. While it may provide important capacity to the park-and-ride lots, it competes with Sounder but the train is faster to south downtown Seattle.

Burien, Kent, Auburn, southeast Auburn and White River Junction are connected by King County Metro Route 180, which stops at both the Auburn and Kent Stations. Route 180 runs every 30 minutes, all day, in both directions. The White River Junction/southeast Auburn portion of the route has good transfer connections to Sounder at the Auburn Station (the Burien-Kent portion has the best and logical transfers at Kent Station).

King County Metro Route 181 travels between Twin Lakes/Federal Way and East Auburn via Auburn Station. Service is provided every 30 minutes all day in both directions. The East Auburn to Auburn Station portion of the route has good transfer connections to northbound Sounder in the a.m. and back in the p.m. Transfer connections from Federal Way to Sounder are decent in the a.m. (missing one Sounder trip) but only about one-half of the p.m. trips have a good transfer.



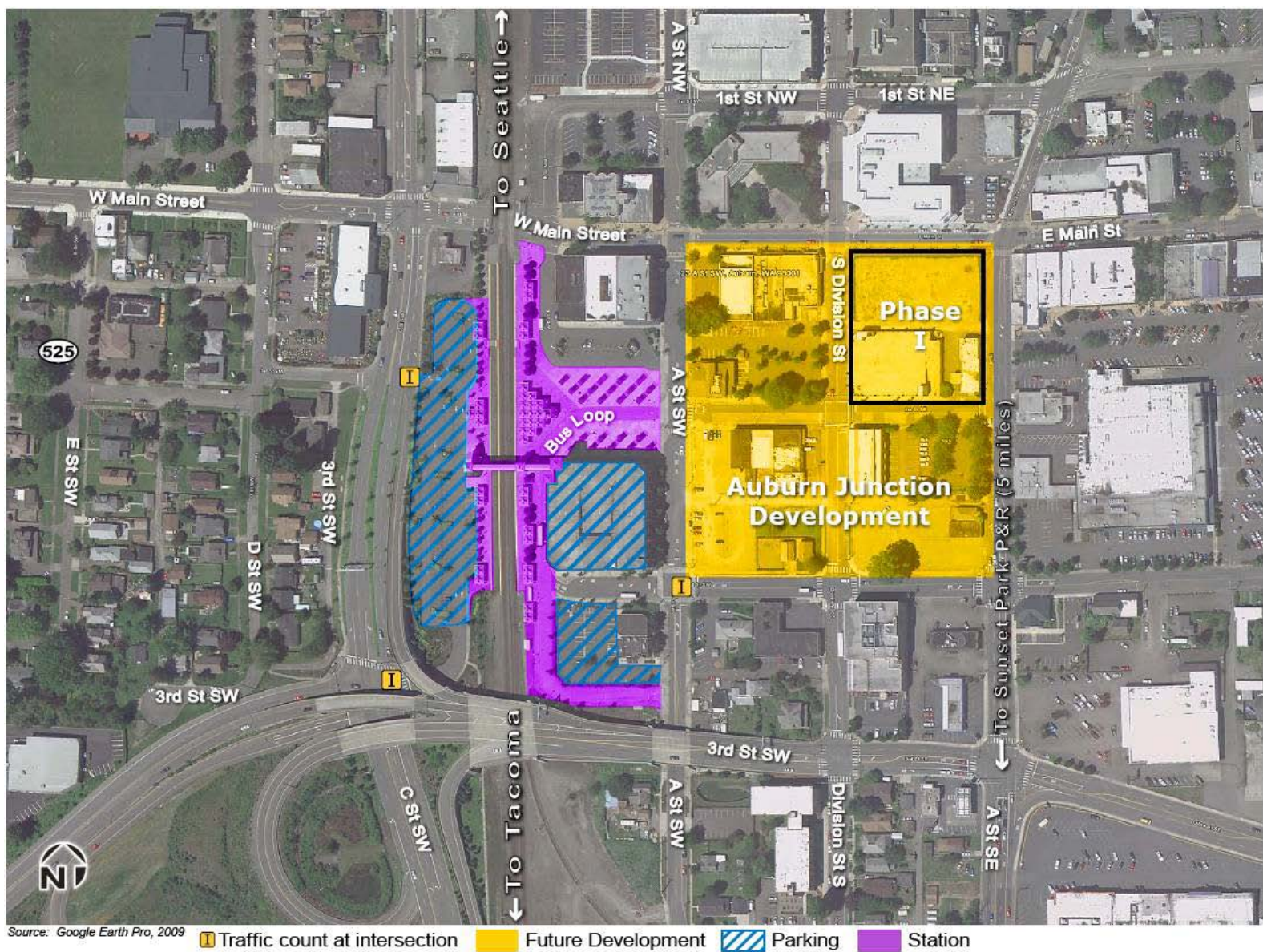


Figure 4: Auburn Station (23 A Street SW)

King County Metro Route 910 connects North Auburn, downtown Auburn/Auburn Station and the SuperMall. Service is every 60 minutes in both directions from about 8:00 a.m. to about 4:30 p.m. These service hours only match up with the last a.m. peak and first p.m. peak Sounder trips.

Auburn/Auburn Station, Algona and White River Junction are connected by service every 60 minutes on King County Metro Route 917, which operates all day. During the peak periods there are transfer connections to three northbound a.m. and three p.m. southbound Sounder trips.

King County Metro Route 919 connects North Auburn, Auburn Station and southeast Auburn with bi-directional service every 60 minutes from about 8:00 a.m. to 4:00 p.m., not within the Sounder peak direction commute trip times.

Pierce Transit (PT) also serves the Auburn Station. PT Route 497 provides shuttle service between the Sunset Park-and-Ride lot and Sounder for all peak period, peak direction Sounder trips. Transfer times are scheduled for five minutes, the train departure and arrival times are shown on the bus timetable. Per the schedule, afternoon bus trips will wait for Sounder connections (i.e. delayed trains) before departing.

## **Jurisdiction Goals and Policies**

Auburn Station is designated as Urban Center by the City's Comprehensive Plan and is zoned Downtown Urban Center. The station is within the City's Regional Growth Center designated by the Puget Sound Regional Council.

***Auburn Comprehensive Plan.*** Auburn revised its Comprehensive Plan in 2009. The original plan was adopted in 1986 and amended in 1995 to address GMA requirements.

Auburn's Urban Center designation includes the following characteristics:

- Concentrated employment and housing, and a mix of other land uses, with direct service by high capacity transit
- An extensive transportation system to help reduce reliance on auto travel

Auburn adopted its Downtown Plan in 2001 and has since begun implementing many of the plan's strategic objectives:

- Establishing the 220-acre Downtown Auburn planning area (bounded by the Interurban Trail to the west, 2nd Street NW and 3rd/4th Streets NE to the north, E Street NE/SE to the east, and SR 18 to the south), including Kent Station, that is the focus for future downtown redevelopment
- Providing incentives for downtown development and redevelopment through various measures, including reducing off-street parking requirements compared to other areas

of the city and in some cases waiving transportation impact fees if a lower level of service is desired

- Encouraging non-motorized pedestrian and bicycle connections and linkages to and within the urban center area
- Encouraging protection of historic assets and resources from redevelopment activities
- Identifying potential catalyst projects and sites to spur development activity in the downtown and better focus redevelopment and marketing efforts
- Encouraging more residential development downtown as well as 24-hour type uses and nighttime activity
- Seeking to remove undesirable land uses and other blighting influences in the downtown area
- Promoting street improvements and enhancements to improve access and the visual qualities of the streetscape

In early 2007, the City established a new zoning district for the majority of downtown, the Downtown Urban Center district. This district allows all types of land uses unless specifically prohibited, and regulates the intensity of development by allowed floor area ratio, providing incentives for higher intensity of use.

To meet the City's goal to encourage the Comprehensive Plan's direction, the City has adopted an overall objective and several policies relating to downtown Auburn transportation. While supportive, the policies pre-date the commuter rail station development and operations but remain valid.

Implementation policies from the Comprehensive Plan include:

- *LU-86: Emphasis should be given to enhancing pedestrian linkages between the Hospital area, the Main Street retail core, the Performing Arts Center, the southwestern portion of Downtown, and the parking area adjacent to Safeway. An important element of this emphasis will be to reduce the pedestrian barrier effect of Auburn Avenue and Auburn Way.*
- *LU-87: The City should build upon past efforts to improve pedestrian amenities, through public improvements, sign regulations and development standards. The maintenance of public and private improvements should be given priority commensurate with downtown's role as the focal point of the community.*
- *LU-88: The City shall work with transit providers to increase the availability and effectiveness of transit in downtown and between downtown, other commercial and employment areas, residential areas, and the region at large.*

- *LU-89: As regional transportation programs such as commuter rail are implemented, the City will strive to ensure that the downtown is a beneficiary.*

**Auburn Comprehensive Transportation Plan.** Auburn's Comprehensive Transportation Plan was amended on December 7, 2009. The plan contains a needs assessment and set of future recommendations for all modes, as well as policies and funding strategies to guide implementation of the plan. The plan includes transportation policies supporting pedestrian and bicycle use and access within the downtown Auburn area and the commuter rail station. Several downtown streets within 0.5 mile of the commuter rail station (including A Street NW, A Street Loop, and F Street SE) are designated for enhancements to include either on-street bicycle lanes or shared travel lanes. No specific, high-priority pedestrian improvements are identified in the plan for the downtown area.

**Commute Trip Reduction.** The City of Auburn contracts with King County Metro Transit to provide CTR support services for the CTR-affected employers in Auburn. Currently, there are 11 CTR-affected employers in Auburn, with a combined total of 5,500 employees. The agency assists employers in complying with state law by providing rideshare support and a host of other incentives aimed at reducing single-occupant vehicle travel.

### Origin and Destination

Three hundred thirty-nine of the passengers who boarded at Auburn Station were surveyed during the first week of November 2010. Table 7 shows the city of origin for the passengers surveyed. Of these 339 passengers, the majority alighted at King Street Station (92%) and Tukwila Station (6%).

**Table 7: Auburn Passenger City of Origin**

City	Boardings	% of Boardings
Algona	12	4
Auburn	226	67
Bonney Lake	5	1
Covington	11	3
Enumclaw	19	6
Federal Way	6	2
Kent	5	1
Lake Tapps	16	5
Maple Valley	8	2
Pacific	10	3
Other	21	6
<b>TOTAL</b>	<b>339</b>	<b>100</b>

### Station Area Access Mode

Arrival mode information was gathered by direct observation at the station on the morning of November 30, 2010 from 5:00 to shortly before 8:30 a.m., when the last train departed. A total of 852 arriving passengers were observed.

**Table 8: Auburn Arrival Mode**

Mode	Arrivals	% of Arrivals
Auto	439	51.5
Bus	263	30.9
Bicycle	11	1.3
Drop-off	72	8.5
Walk	37	4.3
Train	30	3.5
<b>TOTAL</b>	<b>852</b>	<b>100.0</b>

Table 8 summarizes the station arrival mode data.

Just over half of arriving passengers drove themselves to the Auburn Station on that day. A substantial number of station users (over 30%) arrived by bus.



## Rider Survey Information

Arrival mode information was gathered by surveys completed by passengers boarding at Auburn Station during the first week of November 2010. A total of 339 passengers returned surveys. Table 9 summarizes the station access mode data from these surveys.

Approximately 62% of the passengers who returned surveys drove themselves to the station on that day. Sixteen percent of passengers arrived by transit.

**Table 9: Auburn Sounder Access**

Mode	% of Arrivals
Drive	62
Drop-off	13
Carpool	4
Transit	16
Bike	1
Walk	3
Other/Sounder Reverse	1
<b>TOTAL</b>	<b>100</b>

## Observations in the Field

Auburn is a transit hub, with buses from multiple systems (PT, King County Metro, and ST) serving the station. The complexity of inter-modal access and interchange made targeting specific commuter rail access by mode difficult. Arrival mode split data are for all arrivals at the station during the time commuter rail trains were running, but do not isolate passengers leaving the station by train.

The west-side park-and-ride lot was full after the third northbound train departure at 6:26 a.m., and the garage was full after the fourth northbound train departure at 6:51 a.m. Surface street parking spaces are numerous and began to fill following the fourth northbound train departure. It was difficult to distinguish walk-up passengers originating from the surrounding area from auto-mode users parking in peripheral lots and on-street spaces. For this information, we rely on the rider survey results.

## Traffic Counts

Three intersections near the station were counted between 6:30 and 8:30 a.m. on November 2, 2010 (see Figure 4). Both of the west-side parking lot driveways on C Street SW were counted, as well as the main parking garage entry on 2nd Street SW.

The 2nd Street SW/parking garage entry intersection is unsignalized and 2nd Street SW traffic is not required to stop. As with the Kent and Tacoma Dome Station parking garage entrances, this intersection has an earlier peak hour than an intersection of two public streets would. Travelers using Sounder parking arrive at the stations earlier than the normal morning peak hour, both because Sounder trains run earlier in the morning and because these parking garages tend to fill and garage parking is generally considered preferable. There are no traffic operation issues at this intersection in the morning peak hour (6:30 to 7:30 a.m.).

The C Street SW/south parking entry intersection is signalized. The west leg of this intersection is the westbound on-/off-ramps to and from Highway 18. There are no traffic operations issues at this intersection in the morning peak hour (6:55 to 7:55 a.m.).

The C Street SW/north parking entry intersection is unsignalized, and C Street SW traffic is not required to stop. East-west left turns and through movements are prohibited, as are left turns from C Street SW. There are no traffic operations issues at this intersection in the morning peak hour (7:00 to 8:00 a.m.).

### **Proposed Future Developments**

The Auburn Junction project (see Figure 4) was adopted by the City Council in 2008. Alpert International is scheduled to begin construction in 2011 of a 750,000 square foot mixed-use development that will include retail, apartments/condos, a theatre, and court yard.

In addition to the Auburn Junction, the Stratford Company will construct a transit-oriented development east of and adjacent to the Auburn Station. The 200-unit mixed use development is called Auburn Station I and II and will include residential, retail, and commercial uses.

### **Summary**

- Parking spaces in the garage fill to capacity before the last two to three trains in the morning. Observed behavior indicates that commuters are well-aware of the typical, daily pattern and parking capacity conditions.
- The observed pattern of increasing walk, bus and drop-off commuter access to later trains at the Auburn Station indicates that alternative access programs other than increasing parking capacity may enhance station and commuter rail or express bus use.
- Auburn Station has significant transit service that augments and compliments Sounder service.
- Downtown Auburn's gridded and flat street system, with a complete pedestrian network and some bicycle facilities, is generally well-suited to facilitate growth in walk, and to a lesser extent, bicycle access to the station. The city has encouraged residential and commercial growth around the station putting more people and jobs within walking or biking distance.

## Sumner

The Sumner Sounder Station is located in the southwestern part of downtown Sumner, south and west of the Maple Street/Narrow Street/Cherry Street intersection.

Sounder trains depart each weekday morning from Sumner northbound to Seattle at 5:12, 5:52, 6:17, 6:42, 7:07, 7:37, and 8:17 a.m. and southbound to Tacoma at 6:45 and 7:25 a.m. Figure 5 shows the location of the Sumner Station, along with an aerial view.

There are 339 surface parking stalls, including a leased lot at Hunt Avenue and State Street, two bicycle racks (total of eight spaces) and 14 bicycle lockers.

### Transit Connections

Bus stops are located approximately 280 feet south of the station, along Narrow Street between Academy and Harrison Streets. As with other stations in Pierce County, the future of Pierce Transit bus services has been analyzed in the “PT Tomorrow” proposition. The proposition was defeated in February 2011. Pierce Transit’s Board of Commissioners will be reviewing service reduction alternatives. Current plans include reductions in June and October 2011, and February 2012. All special event services are slated for elimination.

ST Express Route 578 is a midday and evening extension of ST Express Route 577 from Federal Way to downtown Seattle. This extension serves the Auburn, Sumner and Puyallup Stations. This service supplements Sounder service by providing a fast service to and from downtown Seattle when Sounder service is limited or not scheduled. ST Express Route 578 also provides peak period, off-peak direction (southbound in the a.m. and northbound in the p.m.) service between Puyallup and Tacoma Dome Station.

PT Route 408 connects the Bonney Lake Park-and-Ride lot with downtown Sumner and Sumner Station. In the peak period service is approximately every 30 minutes and every 60 minutes midday. It functions as both a local route and a “shuttle” to Sounder with good transfers to four of the seven a.m. northbound Sounder trips and five of the seven p.m. southbound commute trips.

PT Route 496 is a shuttle between the Bonney Lake Park-and-Ride and the Sumner Station with timed transfers for all peak period northbound a.m. and southbound p.m. trips.

PT Route 409 connects the 72nd Street Transit Center (Tacoma), Puyallup, Sumner/Sumner Station and the Sumner Industrial area (about three miles north of the station). This route has service every 30 minutes in the peak period and every 60 minutes midday. The Sounder schedule is shown in the bus timetable and there are good transfer connections from and to Puyallup with two a.m. and two p.m. connections to and from the industrial area.



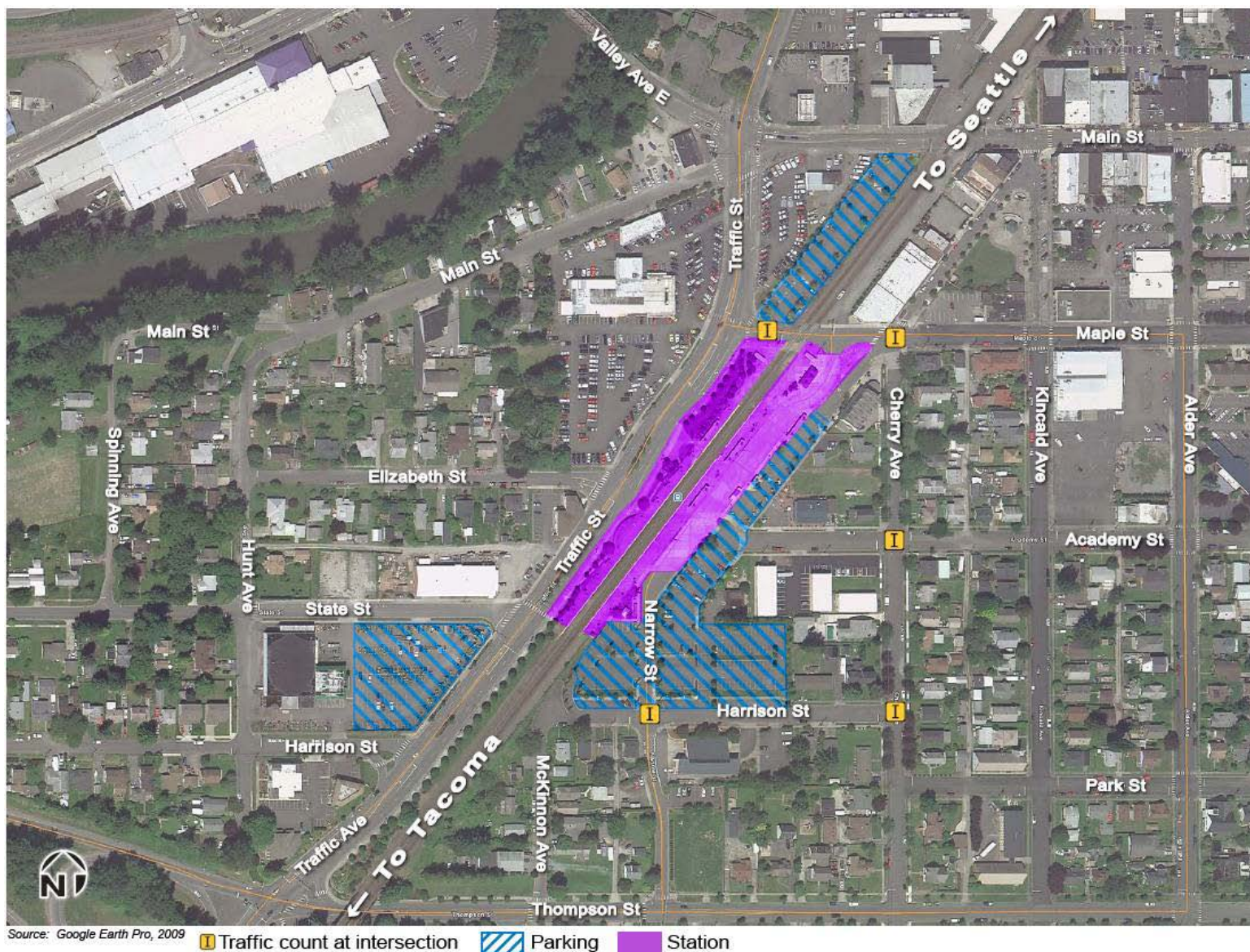


Figure 5: Sumner Station (810 Maple Street)



## Jurisdiction Goals and Policies

Sumner Station is designated as Public-Private Utilities & Facilities by the City's Comprehensive Plan and is zoned Central Business District.

**Sumner Comprehensive Plan.** Sumner revised its Comprehensive Plan in 2009. It was originally adopted in 1994 and amended in 2004 to address GMA requirements (City of Sumner 2009). The Sumner Comprehensive Plan includes specific policy, goals and objectives regarding the commuter rail station land uses and connectivity.

The provision of regional transit service has and will continue to affect land use and transportation in Sumner. The following goals and policies address the key issues and priorities related to station-oriented development in the downtown area.

Implementation policies from the Comprehensive Plan include:

### *Goal 1 Support regional transit connections in the Sumner Planning Area.*

- 1.1 Collaborate when possible with Sound Transit, Pierce County and surrounding cities to do joint planning on future services concerning the commuter rail and transit system.*
- 1.2 Work with local property owners to encourage the development of commercial uses compatible with the commuter rail station.*
- 1.3 Ensure that the commuter rail station does not have an unreasonable adverse impact on the residential character of the neighborhood.*
- 1.4 Consider and pursue opportunities for an increased pedestrian connection to the West Sumner Neighborhood and the Downtown business core such as a pedestrian overpass.*
- 1.5 Continue to explore the parking options and access options for the commuter rail station that are compatible with the surrounding land uses, safe, convenient, and attractive. Address options for location of future parking for expanded service over time.*
- 1.6 Plan for a train station at Stewart Road next to the golf course and adjacent to the northeastern boundary of the Sumner-Pacific Manufacturing/Industrial Center (MIC). The station would help connect high density housing centers with the proposed MIC, and may serve regional populations or function as secondary "skip-stop" stations.*
  - 1.6.1 Work with Sound Transit and Pierce Transit throughout the planning, construction, and operation of a station to ensure it is an integral part of the City's transportation system and the regional transit system.*

- 1.6.2 *Consideration will be given to design controls, compatibility with surrounding land uses, access, transit connections to other parts of town, bicycle storage, relationships to pedestrian and bicycle trails, and parking. Complementary land uses such as civic rooms, day care, small retail, or other uses to be integrated with the station may also be included in the station plan.*
- 1.7 *Promote the use of the Sounder commuter train by the entire Sumner community. Provide housing near the train station for households desiring the close transit availability, and provide services and businesses that cater to residents and train commuters.*
- 1.8 *Work closely with Sound Transit to establish stations north at Stewart Road/Lake Tapps Parkway and at Shaw Road/East Main to relieve ridership and parking demands at the Sumner commuter rail station.*
- 1.9 *Promote and pursue the use of underutilized parking lots throughout the City as potential remote sites for commuter rail station parking.*
- 1.10 *Seek alternatives to the construction of a stand alone parking garage in the Town Center.*
- 1.11 *Request that Sound Transit provide additional bicycle lockers at the station to encourage bicycle commuting to the station. Require that any expansions to parking for the station include increased bicycle lockers.*
- 1.12 *Work with transit agencies to improve the frequency and location of transit service between high density residential areas and the MIC, provide connections between the rail stations and the MIC, and encourage transit ridership through efforts such as prioritizing pedestrian improvements near transit stops and outreach efforts to industrial employers.*

West of the commuter rail station, land is zoned Mixed-Use and Medium Density Residential. Lands south of the station are zoned Medium Density Residential. East of the station areas are zoned Central Business District and Low Density Residential. Land north of the station is zoned General Commercial.

**Sumner Transportation Plan.** In 2004, the City of Sumner updated their long-term Transportation Plan of 2002. The adopted plan identified specific transportation improvement projects that were needed to support the 2020 land use projections. The identified transportation projects allowed the roadways and intersections within the City to operate at or above the City's adopted level of service standards. There are no improvements listed near the Sumner Station.

**Sumner Trail Master Plan.** The Sumner/Pacific Trail Plan was originally adopted in September 1996 and was updated as the Sumner Trail Master Plan in 2008. On a broad scale, the trail and

bicycle routes proposed in the Sumner Trail Master Plan will form linkages to major trails in the surrounding Puget Sound Communities. Near the Sumner Station, bike routes are proposed on Traffic Street, Narrow Street, and Main Street. A trail is also proposed along the White River.

**Commute Trip Reduction.** The City coordinates with Pierce Transit, Sound Transit, and other jurisdictions on CTR programs for three major employers in the Sumner planning area. Sumner's human resources department implements state requirements for CTR per Sumner Municipal Code Chapter 16.06. The CTR program is fairly new, and no baseline information has been collected from employers at this time.

## Origin and Destination

Two hundred sixty-nine of the passengers who boarded at Sumner Station were surveyed during the first week of November 2010. Table 10 shows the city of origin for the passengers surveyed. Of these 269 passengers, the majority alighted at King Street Station (77%) and Tukwila Station (18%).

**Table 10: Sumner Passenger City of Origin**

City	Boardings	% of Boardings
Bonney Lake	100	37.2
Buckley	18	6.7
Edgewood	11	4.1
Lake Tapps	14	5.2
Orting	28	10.4
Puyallup	36	13.4
Sumner	47	17.4
Other	15	5.6
<b>TOTAL</b>	<b>269</b>	<b>100.0</b>

## Station Area Access Mode

Arrival mode information was gathered by direct observation at the station on the morning of November 4, 2010 from 4:45 to approximately 8:20 a.m., which was just after the last train departed. A total of 756 arriving passengers were observed. Table 11 summarizes the station arrival mode data.

**Table 11: Sumner Arrival Mode**

Mode	Arrivals	% of Arrivals
Auto	534	70.6
Bus	109	14.4
Bicycle	18	2.4
Drop-off	84	11.1
Walk	11	1.5
Train	0	0.0
<b>TOTAL</b>	<b>756</b>	<b>100.0</b>

About 70% of the arriving passengers drove themselves to the Sumner Station. Bus and drop-off arrivals also featured heavily in the Sumner Station passengers.

## Rider Survey Information

Arrival mode information was gathered by surveys completed by passengers boarding at Sumner Station during the first week of November 2010. A total of 269 passengers returned surveys. Table 12 summarizes the station access mode data from these surveys.

**Table 12: Sumner Sounder Access**

Mode	% of Arrivals
Drive	71
Drop-off	14
Carpool	0
Transit	7
Bike	3
Walk	4
Other/Sounder Reverse	1
<b>TOTAL</b>	<b>100</b>

Approximately 70% of the passengers who returned surveys drove themselves to the station on that day. An additional 14% of passengers were dropped off that day.

## **Observations in the Field**

The designated park-and-ride lot space was near capacity following the second northbound train departure at 5:52 a.m. Following the third northbound train departure at 6:17 a.m., all park-and-ride lots and immediate surface street parking spaces were filled (100% utilization). After that, observations focused on other modes of arrival.

It was difficult to distinguish whether passengers arriving on foot were residents in local neighborhoods or parking on-street in local neighborhoods, especially after the on-site parking areas reached capacity. The off-site parking lot at Hunt Avenue and State Street appeared to be the parking area of choice for patrons arriving later, reflected in the large number of pedestrians accessing the station along adjacent streets.

## **Traffic Counts**

Six intersections near the station (see Figure 5) were counted between 6:30 and 8:30 a.m. on November 3, 2010. A seventh intersection (Main Street/north parking lot driveway) was counted between 6:30 and 8:30 a.m. on November 11, 2010.

The Harrison Street/Narrow Street intersection is unsignalized, with stop signs on all four legs. The intersection is south and west of the station area, and the north leg of the intersection is the main entry to the south parking lot. There are no traffic issues at this intersection in the morning peak hour (6:40 to 7:40 a.m.).

The Harrison Street/Cherry Avenue intersection is unsignalized and Cherry Avenue traffic is not required to stop. The intersection is south of the station area, and there is no east leg at this intersection. Traffic volumes are very low and there are no traffic issues at this intersection in the morning peak hour (6:55 to 7:55 a.m.).

The Academy Street/Cherry Avenue intersection is unsignalized and Cherry Avenue traffic is not required to stop. The intersection is east of the station. Traffic volumes are very low, with each leg averaging an arriving vehicle every two minutes, and there are no traffic issues at this intersection in the morning peak hour (6:55 to 7:55 a.m.).

The Cherry Avenue/Maple Street/Narrow Avenue intersection is unsignalized and Maple Street traffic is not required to stop. Cherry Avenue ends at Maple Street, and Narrow Avenue is one-way from northwest to southeast. The intersection is northeast of the station. Traffic volumes are very low at this intersection during the morning peak hour, with three of the four legs averaging an arriving vehicle every two minutes, and the busiest (eastbound Maple Street) averaging a vehicle arrival about every 45 seconds. There are no traffic issues at this intersection in the morning peak hour (7:30 to 8:30 a.m.).

The Maple Street/north Sounder Lot Driveway intersection is unsignalized, with Maple Street traffic not required to stop. There is no south leg at this intersection. There are no traffic issues at this intersection in the morning peak hour (7:25 to 8:25 a.m.).

The Main Street/north parking lot driveway intersection is unsignalized and Main Street traffic is not required to stop. There is no north leg at this intersection. Westbound left turns from Main Street into the parking lot are prohibited by median bollards. There are no traffic issues at this intersection in the morning peak hour (7:30 to 8:30 a.m.).

The State Street/Sounder off-site parking lot driveway intersection is unsignalized and State Street traffic is not required to stop. The south leg of this intersection is a gated driveway for a tractor equipment store. This intersection has very low traffic volumes, and there are no issues at this intersection in the morning peak hour (6:30 to 7:30 a.m.).

## Summary

- Surface spaces in the station area fill to capacity before the last two to three trains in the morning. Riders local to Sumner may be traveling to Kent Station for the available parking. Observed behavior indicates that commuters are well-aware of the typical, daily pattern and parking capacity conditions.
- Unlike Puyallup, Auburn and Kent, Sumner has elected to minimize residential and commercial growth around the station to maintain a small town character, designating a large area to the east of downtown as a growth center.
- The pattern of increasing drop-off commuter access to later trains at the Sumner Station indicates that alternative access programs other than increasing parking capacity may enhance station and commuter rail use.
- Sumner's topography and street system, with pedestrian and bicycle links, is generally well-suited to facilitate growth in local walk and bicycle access to the station.

## ***Puyallup***

The Puyallup Sounder Station is located in downtown Puyallup, bounded in general by W Main Avenue, 4th Street NW, W Stewart Avenue, and Meridian Street N.

Sounder trains depart each weekday morning from Puyallup northbound to Seattle at 5:07, 5:47, 6:12, 6:37, 7:02, 7:32, and 8:12 a.m. and southbound to Tacoma at 6:49 and 7:29 a.m. Figure 6 shows the location of the Puyallup Station with an aerial view.

There are 822 total parking stalls, including 498 leased parking stalls (including the “Red Lot” that is seven blocks south of the station, located at 5th Street SW and 9th Avenue SW), eight bicycle rack spaces and 20 bicycle lockers available.

### **Transit Connections**

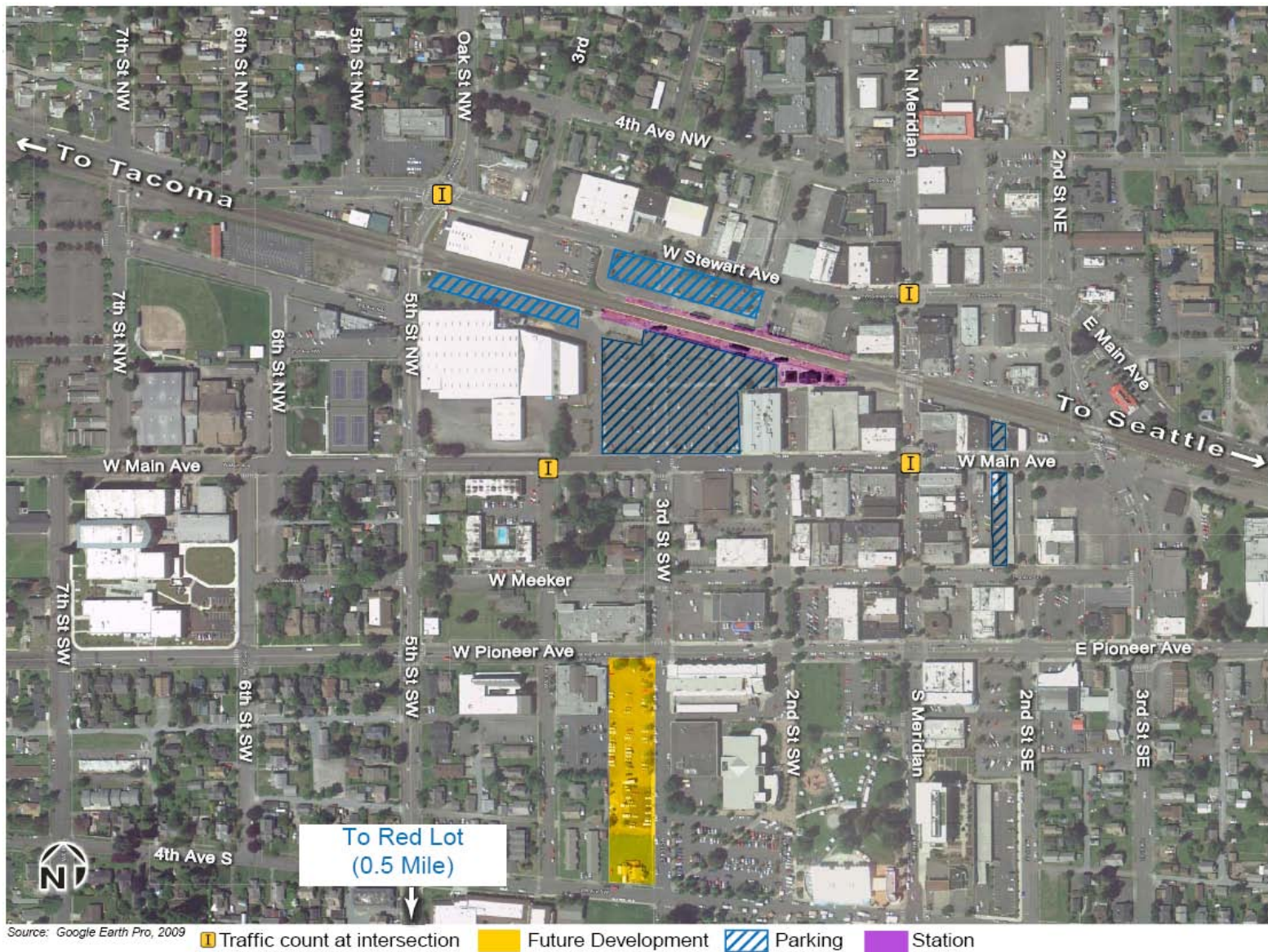
Puyallup Station is served by Sounder, ST Express regional bus and a number of PT bus routes. There are also a number of additional PT bus routes in the vicinity of the station. Bus stops are located along W Stuart Avenue, approximately 160 feet north of the station. As with other stations in Pierce County, the future of Pierce Transit bus services has been analyzed in the “PT Tomorrow” proposition. The proposition was defeated in February 2011. Pierce Transit’s Board of Commissioners will be reviewing service reduction alternatives. Current plans include reductions in June and October 2011, and February 2012. All special event services are slated for elimination.

ST Express Route 578 serves the Puyallup, Sumner and Auburn Stations as a midday and evening/night extension of ST Express Route 577 from Federal Way to Seattle. The service supplements Sounder by providing a fast service between these stations and downtown Seattle in the off-peak times when Sounder does not operate. It also provides peak period, off peak direction (southbound in the a.m., northbound in the p.m.) service between Puyallup and Tacoma.

PT Route 402 connects Hidden Village/SW Puyallup, Puyallup Station and the Federal Way Transit Center approximately every 30 minutes from about 5:00 a.m. to 9:00 p.m. The Sounder schedule is shown on the bus timetable and there are about 10 minute transfer connections to most of the Sounder trips in the morning. For return trips in the afternoon, there is generally a 15-20 minute wait for the bus.

PT Route 409 connects the 72nd Street Transit Center, Puyallup, Sumner and the Sumner Industrial area. This route has service every 30 minutes in the peak period with service every 60 minutes midday. The transfers are coordinated best at the Sumner Station (the Puyallup Station Sounder schedule is not in the timetable) but there are some reasonable transfer connections to and from the west with 5-10 minute waiting times in the a.m. (but two bus trips have the same arrival time as the Sounder departure) and 15-20 minute transfer times in the p.m.





**Figure 6: Puyallup Station (131 W Main Street)**

PT Routes 413, 446 and 490 are in the general vicinity of Puyallup Station but do not serve the station.

PT Route 495 connects the South Hill Mall Transit Center to Puyallup Station with seven a.m. northbound trips and seven p.m. southbound trips, all scheduled for convenient timed transfers.

## **Jurisdiction Goals and Policies**

The Puyallup Station is designated Central Business District and Central Business District Core by the City's Comprehensive Plan and zoning code. The Puget Sound Regional Council has designated the Puyallup downtown area, including the station, as a Regional Growth Center.

***Puyallup Comprehensive Plan.*** The Comprehensive Plan was first adopted in 1991. Since that time, the plan has been updated annually. One of the main goals of the plan is to create a multimodal approach to transportation, focusing on walkway, bikeway, and transit systems in addition to roadways (City of Puyallup 1994).

Specific goals, policies and objectives include:

### *Land Use Element*

- *II.1.b: Focus multi-family housing, large scale developments, and taller buildings within the City's two Regional Growth Centers on South Hill and Downtown.*
- *II.7: In order to stimulate employment and residential development, coordinate land use and transportation planning efforts to functionally unite the City's two Regional Growth Centers and the Meridian corridor.*
- *V.2: Focus new population and housing growth within Regional Growth Centers and other areas with prioritized infrastructure financing.*
- *VI.1.g: Promote mixed-use projects integrating moderate and high density residential uses with commercial uses in areas designated for pedestrian oriented commercial, limited commercial, and automobile oriented commercial, especially within the City's two regional growth centers. Mixed-use developments including a residential component within pedestrian oriented commercial (POC) areas should be subject to height, bulk, and building design standards with no density limitations imposed.*
- *X.2.a: Encourage commercial development and redevelopment to be focused into compact centers with interrelated functions and discourage further strip commercial development.*
- *XVI: Promote mass transit and accommodate individuals who rely upon bus and/or commuter rail by assuring a mix of uses near to the commuter rail station that serve commuter needs and complement each other.*



- *XVI.4: Exclude new automobile related uses. The sale, service or maintenance of automobiles is unrelated to the daily shopping needs of individuals relying primarily on mass transit, does not reflect the day to day needs of households living in the Commuter Rail Station Center and downtown area, and interferes with the retail clustering opportunities.*
- *XVI.4.a: Prohibit primary use surface level parking lots (i.e., lots that are not associated with a specific use and site) in the Commuter Rail Station Center and downtown area.*
- *XVII: Through public infrastructure investments and streamlining the development review process, encourage development of residential and employment densities downtown that are sufficient to support transit service.*

#### *Transportation Element*

- *I.6.a: The City should encourage Pierce Transit to increase the availability of transit, including the frequency of service and the number of bus routes, especially serving transit hubs in downtown Puyallup (i.e., the Sounder Station), and on South Hill (i.e., the existing transit center and future Bus Rapid Transit hub).*
- *I.6.b: The City should cooperate with transit providers, including Pierce Transit and the Regional Transit Authority, to encourage provision of facilities and services that make multi-modal travel more convenient.*
- *I.6.h: The City should implement facilities which favor transit and other high occupancy vehicles at congested intersections where appropriate, such as the bus rapid transit system identified in the LIFT [Local Infrastructure Financing Tool] program.*
- *Goal V: A wide range of local and regional transit services to meet the needs of present and future residents should be developed.*
- *V.3.a: The City acknowledges that Sound Transit has primary responsibility for providing commuter rail service. The City shall cooperate with Sound Transit in siting commuter rail stations within the UGA [Urban Growth Area], as appropriate, and expanding station facilities and services, as needed.*

***Puyallup Transportation Plan.*** In 2000, the City began the process to update its Transportation Plan, the foundation of the Transportation Element (City of Puyallup 2000). In 2002, additional amendments were incorporated into the annual amendment of the City's Transportation Element based on work that came from the City's updated Comprehensive Transportation Plan. The Plan includes CTR goals.

***Downtown Management Parking Plan.*** The City is addressing strategies for appropriately managing parking facilities in the Central Business District of Downtown Puyallup. Planning staff are working closely with stakeholders to develop a comprehensive vision and overall plan for managing parking demand and supply in this sub-area. Preliminary goals were presented to

the Planning Commission on May 12, 2010. Currently, city staff is considering revising time limits and use policies for on and off-street parking facilities in the city's downtown core. These efforts are being undertaken to maximize and better utilize existing facilities, channel long-term parking demands into off-street parking lots, and to better provide for alternative transportation modes. This process includes changes to both the parking policies described in the city's comprehensive plan and the physical time limit restrictions and regulations on and off-street in the downtown area.

## Origin and Destination

Two hundred sixty-four of the passengers who boarded at Puyallup Station were surveyed one morning during the first week of November 2010. Table 13 shows the city of origin for the passengers surveyed. Of these 264 passengers, the majority alighted at King Street Station (81%) and Tukwila Station (14%).

**Table 13: Puyallup Passenger City of Origin**

City	Boardings	% of Boardings
Eatonville	5	2
Graham	16	6
Puyallup	204	78
Spanaway	11	4
Tacoma	14	5
Other	14	5
<b>TOTAL</b>	<b>264</b>	<b>100</b>

## Station Area Access Mode

Arrival mode information was gathered by direct observation at the station on the morning of November 2, 2010 between 4:45 and 8:15 a.m., which was just after the departure of the last train. A total of 1,062 arriving passengers were observed. Table 14 summarizes the station arrival mode data.

**Table 14: Puyallup Arrival Mode**

Mode	Arrivals	% of Arrivals
Auto	586	55.2
Bus	146	13.7
Bicycle	19	1.8
Drop-off	104	9.8
Walk	201	18.9
Train	6	0.6
<b>TOTAL</b>	<b>1,062</b>	<b>100.0</b>

## Rider Survey Information

Arrival mode information was gathered by surveys completed by passengers boarding at Puyallup Station during the first week of November 2010. A total of 264 passengers returned surveys. Table 15 summarizes the station access mode data from these surveys.

Approximately 73% of the passengers who returned surveys drove themselves to the station on that day. An additional 12% of passengers were dropped off that day.

**Table 15: Puyallup Sounder Access**

Mode	% of Arrivals
Drive	73
Drop-off	12
Carpool	3
Transit	6
Bike	1
Walk	4
Other/Sounder Reverse	1
<b>TOTAL</b>	<b>100</b>

## Observations in the Field

Although the data indicate that only just over 55% of arriving passengers drove themselves to the station, the high number of walk-up passengers observed could indicate that many

passengers drove to the station but parked off-site after the main parking lot was full. The north lot was full shortly after the fifth northbound train departed at 7:02 a.m. The Puyallup Fair Red Lot, which opened in October 2009 for station patrons, had only six cars in it at the end of the observation period.

## **Traffic Counts**

Four intersections near the station (see Figure 6) were counted between 6:30 and 8:30 a.m. on November 2, 2010, the same day station arrival mode split observations were recorded.

The 4th Street NW/W Stewart Avenue intersection is signalized with left turn lanes on all four legs and right turn bypass lanes in the eastbound and westbound directions on W Stewart Avenue. There are no traffic issues at this intersection in the morning peak hour (7:10 to 8:10 a.m.).

The Meridian Street N/W Stewart Avenue intersection is signalized. Meridian Street N is one-way southbound. There are no traffic issues at this intersection in the morning peak hour (7:30 to 8:30 a.m.).

The 4th Street SW/W Main Avenue intersection is unsignalized and W Main Avenue traffic is not required to stop. There is no north leg at the intersection. There are no traffic issues at this intersection in the morning peak hour (6:55 to 7:55 a.m.).

The Meridian Street N/W Main Avenue intersection is signalized. Meridian Street N is one-way southbound. There are no traffic issues at this intersection in the morning peak hour (7:20 to 8:20 a.m.).

## **Proposed Future Developments**

The Administrative Office Building site (located at 330 3rd Street SW, south of the station), is a proposed 1.1 acre transit-oriented development that would provide electric car charging, office and retail space, 10-30 housing units, and approximately 100 to 200 parking stalls for the Puyallup Station.

## **Summary**

- The Puyallup Sounder Station's many surface lots are full, but passengers who park and ride the train do not appear to be using the Puyallup Fair Red Lot, which opened earlier in the fall, as much as their preference for parking on the downtown surface streets or other nearby off-site areas and walking to the station. Current parking utilization of the Red Lot ranges from approximately 20 and 30 cars per day.

- Very high walk-up access to the station has been observed compared to other stations. This could be attributed to the presence of residences within walking distance of the station, but it is likely that station users parking on the street or in remote lots (Cornforth/Campbell lot, Eagles lot, Blue Lot, Red Lot) and walking to the station were counted as arriving on foot when in fact their primary mode of access was the auto.
- Puyallup's topography and street system, with pedestrian and bicycle links, is generally well-suited to facilitate growth in local walk and bicycle access to the station.

## ***Tacoma Dome***

The Tacoma Dome Sounder Station is located southeast of downtown Tacoma, just north of the Tacoma Dome and adjacent to Freighthouse Square.

Sounder trains depart each weekday morning from the Tacoma Dome Station northbound to Seattle at 4:55, 5:35, 6:00, 6:25, 6:50, 7:20, and 8:00 a.m. Southbound trains from Seattle arrive at 7:08 and 7:48 a.m., and in the afternoon at 4:14, 4:49, 5:19, 5:44, 6:11, 6:39, and 7:14 p.m. Figure 7 shows an aerial with the location of the Tacoma Dome Station.

There are 2,283 parking stalls, 10 covered bicycle rack spaces in the garage and 28 bicycle lockers available.

### **Transit Connections**

A very busy multi-modal hub, this station is served by Sounder, Tacoma Link light rail, seven ST Express bus routes, six PT routes, the Olympia Express (a joint PT and Intercity Transit service) and Greyhound. The transit center serving ST Express buses, PT, the Olympia Express, and Greyhound is north of the platform, and you must walk through Freighthouse Square and the parking garage (approximately 480 feet from of the station). Tacoma Link stops across the street from Freighthouse Square, approximately 120 feet north of the station. As with other stations in Pierce County, the future of Pierce Transit bus services has been analyzed in the “PT Tomorrow” proposition. The proposition was defeated in February 2011. Pierce Transit’s Board of Commissioners will be reviewing service reduction alternatives. Current plans include reductions in June and October 2011, and February 2012. All special event services are slated for elimination.

Tacoma Link connects Tacoma Dome Station through downtown Tacoma to the theater district, providing service every 10 minutes from 7:00 a.m. to 10:00 p.m. and 20 minute service before and after this time period. For any riders accessing northbound Sounder trips in the morning from downtown, there is no Tacoma Link to the first trip, service every 20 minutes for the next three trips, and service every 10 minutes for the last three a.m. trips. All of the afternoon southbound Sounder trips are met by Tacoma Link every 10 minutes.

ST Express bus routes 574, 578, 586, 590, 593, 594 and 599 serve the Tacoma Dome Station. Route 599 is notable as the bus operates as an extension of Sounder to Lakewood Station. Other routes provide service to some of the Sounder markets at times and directions that Sounder does not operate, while others serve entirely separate markets.

Greyhound provides service to Seattle, inter-state destinations and international service from this station. There are four daily roundtrips to Vancouver, B.C., via Seattle and three daily round trips to Portland, and beyond.



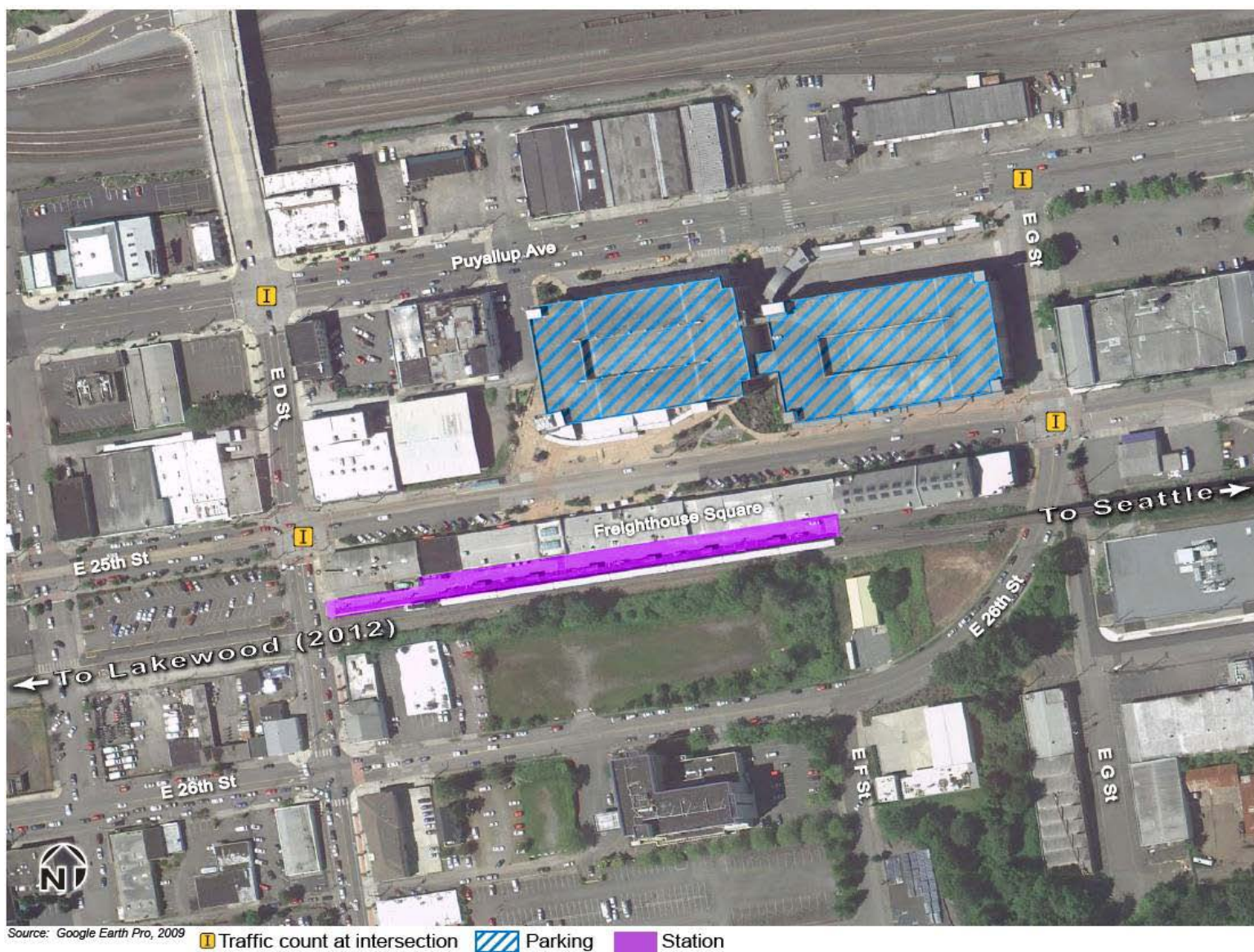


Figure 7: Tacoma Dome Station (424 E 25th Street)



A regional service, the Olympia Express is operated jointly by PT (designated Routes 601 and 603A) and Intercity Transit (Route 603 trips). There are trips every 5-15 minutes in peak periods and approximately every 90 minutes midday. About one-half of the trips stop at the Tacoma Dome Station.

The following PT routes serve this station:

- Route 1: Roy Y Park-and-Ride – Tacoma Dome Station – Downtown Tacoma – Tacoma Community College Transit Center. This route has all day service every 15 minutes except for in the early a.m. and after 8:00 p.m. when service is every 30 minutes. The Tacoma Dome Station is only served directly during peak periods, via a short deviation from Pacific Avenue.
- Route 41: Downtown Tacoma – Tacoma Dome Station – 72nd Street Transit Center and Park-and-Ride lot. This is all day, bi-directional service with service that varies from every 20-35 minutes. Transfer times to Sounder vary from 5-20 minutes.
- Route 102: Gig Harbor – Tacoma Express. This is a peak period, peak direction service with six a.m. and six p.m. trips. Five of the Route 102 morning trips make a good connection with Sounder but only three do in the p.m.
- Route 490: South Hill – Downtown Tacoma. This route has four a.m. and four p.m. peak period, peak direction trips. Overall the transfer connections to and from Sounder are not good.
- Route 500: Downtown Tacoma – Federal Way and Route 501 Milton – Federal Way. All trips serve the Tacoma Dome Station. These routes are not particularly relevant to Sounder service.

Amtrak, currently located at 1001 Puyallup Avenue, plans to move its station into Freighthouse Square.

## Jurisdiction Goals and Policies

The Tacoma Dome Station is within the urban center mixed-use in the Tacoma Dome zone, an area characterized by dense mixed-use development. The station is also within the Tier I – Primary Growth Area of the Urban Growth Tier, which serves as the focus of growth for the next six years (City of Tacoma 2010). The Puget Sound Regional Council has designated the downtown area, including the station, as a Regional Growth Center.

***Tacoma Comprehensive Plan.*** The Comprehensive Plan was first adopted in 1975. At that time, it was entitled the Land Use Management Plan: Goals and Policies for Physical Development. The 2010 Annual Amendment to the Comprehensive Plan was adopted by the City Council on June 15, 2010, per Amended Ordinance No. 27892.

The applicable goals of the Tacoma Comprehensive Plan are to:

- *1: Achieve a balanced pattern and variety of growth and development that occurs in an orderly, timely, and desirable fashion.*

- *2: Support a multimodal transportation system that efficiently moves people and goods with optimum safety and speed, maximizes the conservation of energy and minimally disrupts the desirable features of the environment.*

Specific policies include:

- *LU-GGD-3 Concentrated Development – Growth and development throughout the urban area should be regulated, stimulated, and otherwise guided toward the development of compact concentrated areas to discourage sprawl, facilitate economical and efficient provision of utilities, public facilities and services, and expand transportation options to the public.*
- *LU-MUCD-5 Public Transit Support – Give maximum consideration for transit user convenience in centers including pullout lanes, fully developed transit stops, and, where appropriate, park and ride and multimodal facilities.*
- *LU-MUCD-6 Compactness – Centers must remain compact enough to increase densities, facilitate economical and efficient provision of utilities, public facilities and services, and support more walking, bicycling, and transit use.*
- *LU-MUCC-1 Public Transit Support – Integrate major collection points for local public transit within designated community centers.*
- *LU-RDHI-1 Locate Near or Within Regional Activity Centers – High-density residential developments should be located near and within regional mixed-use centers where utilities, transit facilities, employment opportunities and commercial conveniences and services are available to accommodate developments of this nature.*
- *LU-RDHI-7 Special Amenities – Encourage innovations in the development of high intensity residential areas to include such conveniences as grade-separated pedestrian crossings, public transit connections and mixed-use development within high-rise structures in order to meet the needs of residents in these areas.*
- *T-LUT-1 Land Use Considerations – Development, expansion, or improvement of transportation facilities should be coordinated with existing and future land use patterns and types of development.*
- *T-LUT-2 Land Use Patterns – Encourage land use patterns and developments, especially in mixed-use centers, that support non-single occupancy vehicle travel, increase community access, improve intermodal connectivity, and encourage short trips easily made by walking or bicycling for recreation and commuting.*
- *T-LUT-9 Transit Oriented Development – Encourage and promote transit-oriented development (TOD) and provide incentives for development that includes specific TOD features.*

- *T-MS-4 Transit Planning – Support future transit planning among local and regional governmental agencies to improve the reliability, availability, and convenience of transit options.*

**Tacoma Mobility Master Plan.** The City of Tacoma Mobility Master Plan was created in 2010. The Tacoma Mobility Master Plan provides a vision, objectives, and implementation plan for how the City of Tacoma can improve conditions for bicycling and walking in Tacoma over the next 20 years. The plan envisions an interconnected bicycle and pedestrian network that provides safe routes to neighborhoods, schools, recreational public facilities, business districts, transit centers and environmental features. Multi-modal connections and CTR policies are included (City of Tacoma 2010). Near the station, bicycle lanes are proposed along East D Street and Puyallup Avenue, with a bicycle boulevard proposed along SR 509 with a connection to Pacific Avenue. A trail is also proposed along East D Street.

**Commute Trip Reduction.** The Tacoma City Council adopted the CTR Plan in July 2007 (Resolution No. 37220) and adopted the CTR Ordinance into the Tacoma Municipal Code, Chapter 13.15, in December 2008 (Ordinance No. 27771). The CTR Plan provides guidelines for the City and major employers affected by the State law to implement effective strategies to achieve the goals of 10% reduction in drive-alone trips and 13% reduction in vehicle miles traveled by 2011.

In addition to the mandated program activity, the City of Tacoma is participating in a voluntary pilot program encouraged and funded by the State, whereby downtown Tacoma is designated as a Growth and Transportation Efficiency Center (GTEC). More aggressive CTR strategies will be implemented within the GTEC, involving selected target audiences besides the CTR-affected employers. Expected outcomes of the pilot program are the reduction of auto-dependent trips and the alleviation of the burdens on State highway facilities within and between GTECs. The GTEC program is effective from July 2008 through June 2012 (City of Tacoma 2010).

## Origin and Destination

One hundred forty-seven of the passengers who boarded at Tacoma Dome Station were surveyed one morning during the first week of November 2010. Table 16 shows the city of origin for the passengers surveyed. Of these 147 passengers, the majority alighted at King Street Station (66%), Tukwila Station (25%), and Kent Station (9%).

**Table 16: Tacoma Dome Passenger City of Origin**

City	Boardings	% of Boardings
Gig Harbor	11	7
Olympia	7	5
Lakewood	5	3
Spanaway	7	5
Tacoma	92	63
University Place	13	9
Other	12	8
<b>TOTAL</b>	<b>147</b>	<b>100</b>

## Station Area Access Mode

Arrival mode information was gathered by direct observation at the station on the morning of November 4, 2010 from 4:30 to 8:00 a.m., when the last train departed. A total of 2,147 arriving passengers were observed. Table 17 summarizes the station arrival mode data.

The large number of parking spaces available and the fact that this is currently the southern terminus of the Sounder line contribute to the very large passenger demand at this station. More than three quarters of passengers arriving at the Tacoma Dome Station drove themselves. There also were a significant number of bus arrivals at the station.

**Table 17: Tacoma Dome Arrival Mode**

Mode	Arrivals	% of Arrivals
Auto	1,651	76.9
Bus	255	11.9
Bicycle	18	0.8
Drop-off	113	5.3
Walk	12	0.6
Train	84	3.9
Light Rail	14	0.6
<b>TOTAL</b>	<b>2,147</b>	<b>100.0</b>

## Rider Survey Information

Arrival mode information was gathered by surveys completed by passengers boarding at the Tacoma Dome Station during the first week of November 2010. A total of 147 passengers returned surveys. Table 18 summarizes the station access mode data from these surveys.

**Table 18: Tacoma Dome Sounder Access**

Mode	% of Arrivals
Drive	81
Drop-off	8
Carpool	3
Transit	3
Bike	1
Walk	2
Other/Sounder Reverse	2
<b>TOTAL</b>	<b>100</b>

Over 80% of the passengers who returned surveys drove themselves to the station on that day. Eight percent were dropped off. Arrivals by carpool, transit, bike, walk, and other were relatively similar (between one and three percent each).

## Observations in the Field

The east end of the station platform is accessible to East G Street south of Freighthouse Square, but it was not observed directly. After the observation period, 20 cars were counted parked along East G Street south of the railroad tracks. Because it is not clear whether these vehicles were driven by station users, they are not included in the station arrival estimates. At the end of the observation period, the two station parking garages had the following available parking spaces (combined):

- 223 Unrestricted
- 12 Handicapped
- 3 Employee Only
- 58 Short Term
- 1 Vehicles over 7'2" only

A Pierce Transit operations staff member present at the station bus platform on Puyallup Avenue for most of the observation period commented that passenger drop-off activity

sometimes occurs in the bus area and can cause bus queuing problems. There is not a designated drop-off zone for the Tacoma Dome Station.

## **Traffic Counts**

Intersections with traffic counts are shown on Figure 7. The East D Street/Puyallup Avenue intersection is signalized, with left turn lanes on three of the four legs (all but southbound). There are no traffic issues at this intersection in the morning peak hour (7:10 to 8:10 a.m.).

The East G Street/Puyallup Avenue intersection is signalized, with no street to the north. The north side of Puyallup Avenue is occupied by a business's parking/loading area, but there is no signal head controlling traffic entering the intersection from the business. Buses accessing the Tacoma Dome Station use this intersection extensively. There are no traffic issues at this intersection in the morning peak hour (7:20 to 8:20 a.m.).

The East D Street/E 25th Street intersection is signalized, with no left-turn lanes marked on any approach. Traffic volumes are very low and there are no traffic issues at this intersection in the morning peak hour (6:35 to 7:35 a.m.).

The East G Street/E 25th Street intersection is signalized. The light rail/streetcar tracks along E 25th Street transition from median-running east of East G Street to north-side running west of East G Street. There are no traffic issues at this intersection in the morning peak hour (6:55 to 7:55 a.m.).

## **Proposed Future Developments**

Construction of the new LeMay Museum (an interactive automobile museum and educational center) began in 2010. The 165,000 square foot building will include a collector car center, galleries, a banquet hall, meeting space, car storage, restaurant, administrative offices, and an associated 3.5 acre showfield. The site is located southwest of the Tacoma Dome, at the intersection of I-5 and I-705.

## **Summary**

- There is a substantial amount of bus transfer activity, and many garage users boarded buses rather than the Sounder train. The ST 590 Express bus is extremely popular because it has service every five minutes in the peak period.
- Neither of the two large parking garages were filled during the time Sounder trains were departing.
- In the early morning hours, lighting appeared to be lacking along E 25th Street, where walking passengers from the parking garages to (and through) Freighthouse Square cross to access the Sounder platform. Near misses were observed.

- There did not appear to be a single well-used drop-off area. Passengers were dropped off at many different locations around the station area.



## ***South Tacoma***

The South Tacoma Sounder Station, which has been constructed, will be served by Sounder when service to Lakewood begins in 2012. The station is located in southwest Tacoma, south and west of the major intersection of S 56th Street and South Tacoma Way. Figure 8 shows the location of the South Tacoma Station, with an aerial view.

There are 220 parking stalls in the garage, 16 bicycle rack spaces and four bicycle lockers available.

### **Transit Connections**

The station is served by ST Express Route 593 through the Tacoma Dome Station to downtown Seattle. It is also served by PT Routes 53 and 59 via S 56th Street (stops approximately 4,750 feet/0.9 mile and 1,580 feet/0.3 mile from the station, respectively) and PT Route 300 via South Tacoma Way (approximately 530 feet from the station). Possible modifications to these and other nearby Pierce Transit routes are included in the “PT Tomorrow” proposition. The proposition was defeated in February 2011. Pierce Transit’s Board of Commissioners will be reviewing service reduction alternatives. Current plans include reductions in June and October 2011, and February 2012. All special event services are slated for elimination.

### **Jurisdiction Goals and Policies**

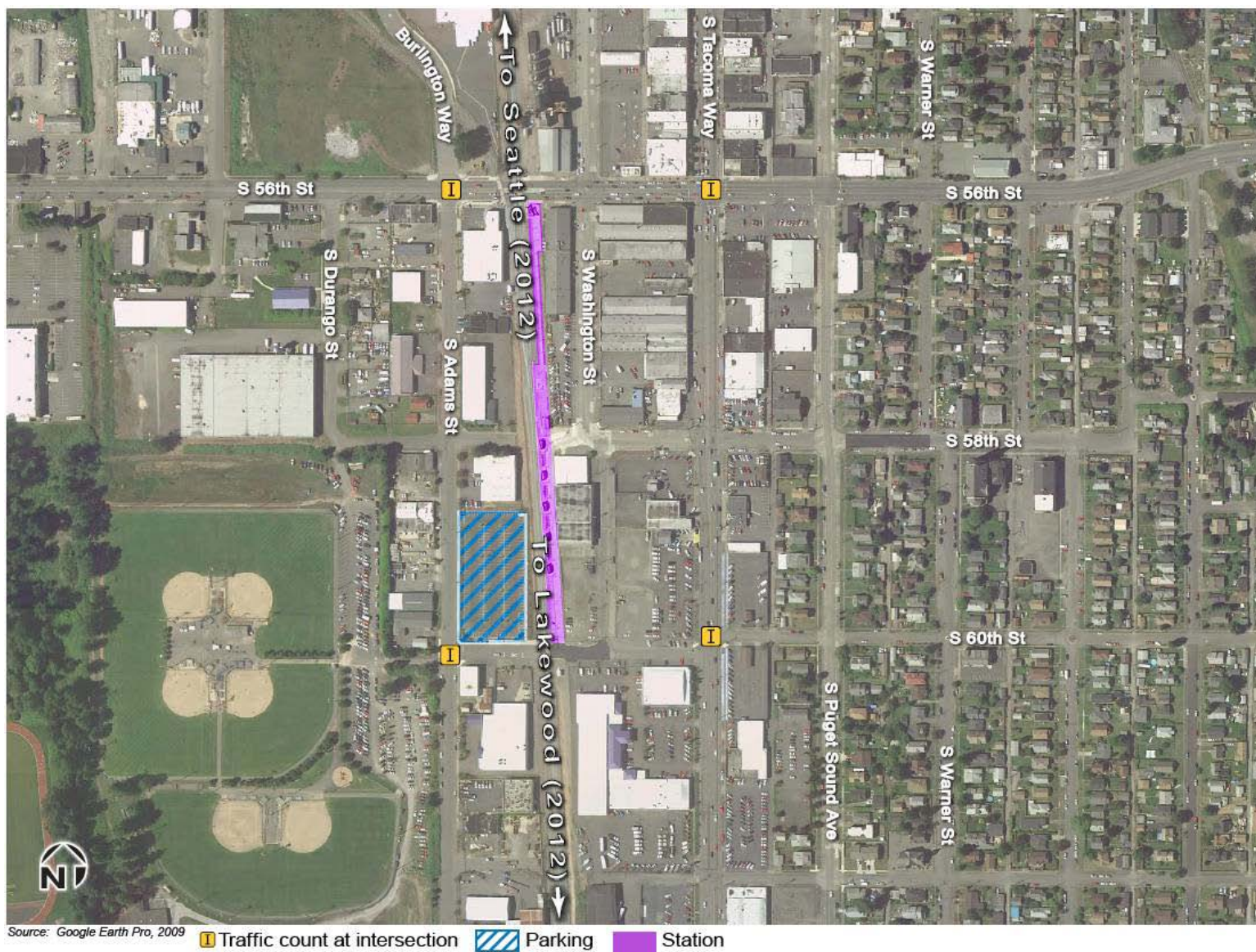
The South Tacoma Station is designated Heavy Industrial and lies within the South Tacoma Manufacturing/Industrial Center overlay.

The applicable goals and policies for the Comprehensive Plan are described above in the Tacoma Dome section.

***Tacoma Mobility Master Plan.*** Approximately 1,580 feet/0.3 mile west of the station, an extension to existing bicycle lanes is proposed along S Tyler Street (north of S 62nd Street) and along S 56th Street. An extension of the existing trail along S Clement Avenue/Street is also proposed. A bicycle boulevard is proposed along S 54th Street (approximately 1,050 feet/0.2 mile northeast of the station). The Water Ditch Trail is located approximately 2,110 feet/0.4 mile east of the station.

### **Origin and Destination**

Because riders of ST Express Route 593 alight at Tacoma Dome Station, rider surveys from the South Tacoma Station were captured on the train from those boarding at Tacoma Dome Station.



**Figure 8: South Tacoma Station (5650 S Washington Street)**

## **Station Area Access Mode**

Field data and observations were not collected for the South Tacoma Station because it is not currently open for Sounder service.

## **Rider Survey Information**

Rider surveys from the South Tacoma Station were captured on the train from those boarding at Tacoma Dome Station.

## **Traffic Counts**

Intersections with traffic counts are shown on Figure 8. The South Tacoma Way/S 56th Street intersection is signalized, with left turn lanes on all four legs. Traffic volumes are moderate, as S 56th Street is a primary east-west commute route for the area. However, there are no traffic issues at this intersection in the morning peak hour (7:30 to 8:30 a.m.).

The South Tacoma Way/S 60th Street intersection is unsignalized and South Tacoma Way traffic is not required to stop. The east and west legs are offset by about 40 feet. Traffic volumes are very low. There are no traffic issues there in the morning peak hour (7:30 to 8:30 a.m.)

The S Adams Street/S 56th Street intersection is unsignalized and S 56th Street traffic is not required to stop. S 56th Street has a center turn lane. The heavy volumes on S 56th Street could result in some delay for northbound vehicles desiring to turn left and go west. However, the volume of traffic making this movement in the morning peak is very low, and the center turn lane will allow such vehicles to use separate gaps in eastbound and westbound traffic to complete the turn. There are no traffic issues there in the morning peak hour (7:30 to 8:30 a.m.).

The S Adams Street/S 60th Street intersection is unsignalized and S Adams Street traffic is not required to stop. The west leg of the intersection is an entrance to the South End Recreation Area. Traffic volumes are very low. There are no traffic issues there in the morning peak hour (7:30 to 8:30 a.m.).

## **Proposed Future Development**

Groundbreaking on the South Tacoma Community Center began in September 2009. After completion, the 75-acre community complex will include a community center, sports complex, outdoor adventure multiplex, and trails. The site is located one block (240 feet) west of the station.

## Summary

- Currently, the station appears to be used by only a few drivers, based on a single mid-day observation of parking lot occupancy. No other arrival mode information has been collected.
- The S Adams Street/S 56th Street intersection has potential for peak hour delay problems once the station opens for Sounder service.

## **Lakewood**

The Lakewood Sounder Station, which has been constructed and will be fully open in 2012 when Sounder service is extended to Lakewood, is located in southern Lakewood between St. Clare Hospital and I-5, along Pacific Highway South. The station currently is served by ST Express buses. Figure 9 shows an aerial view with the location of the Lakewood Station.

There are 600 parking stalls and 18 covered bicycle rack spaces available.

### **Transit Connections**

Bus stops are located next to and east of the station platform. ST Express Routes 592/594 operate from the Lakewood Station (a few peak period trips extend to/from DuPont) to downtown Seattle. The peak period (Route 592) service varies from every 7-15 minutes with midday (Route 594) service every 30 minutes. The 592 trips bypass Tacoma but the 594 trips stop at the Tacoma Dome Station.

ST Express Route 599 is a bus-operated Sounder route extension from the Tacoma Dome Station to Lakewood Station. There are timed transfers for all Sounder trips and no fares are collected on the buses but riders must have a valid transfer, pass, ORCA card, or Sounder ticket. Service on Route 599 would be cut back once Sounder service to Lakewood Station begins in 2012.

PT Route 300 travels between Lakewood Station and the Lewis-McChord Joint Base. There is service every 30 minutes during the day and every 60 minutes in the evening. Possible modifications to these and other nearby Pierce Transit routes are included in the “PT Tomorrow” proposition. The proposition was defeated in February 2011. Pierce Transit’s Board of Commissioners will be reviewing service reduction alternatives. Current plans include reductions in June and October 2011, and February 2012. All special event services are slated for elimination.

The Olympia Express from Olympia to Tacoma is provided jointly by PT (trips designated 601 and 603A) and Intercity Transit (Route 603 trips). There are trips every 5-15 minutes in peak periods and roughly every 60 minutes midday. All trips stop at the Lakewood Station.

Other PT routes operate in the vicinity and may be included in future modifications to serve the Lakewood Station.

### **Jurisdiction Goals and Policies**

The Lakewood Station is within the Transit Oriented Commercial zone within the Lakewood Station District and is designated as Corridor Commercial by the City’s Comprehensive Plan. The station lies within the area designated by the Puget Sound Regional Council as a Regional Growth Center.





**Figure 9: Lakewood Station (11424 Pacific Highway SW)**



**Lakewood Comprehensive Plan.** Lakewood adopted its initial comprehensive plan in 2000 as a new city and updated the plan in 2004. In addition, the plan is amended yearly as provided for in the state GMA. As part of the plan's land-use element, the City created the Lakewood Station District and an urban design framework for the district (City of Lakewood 2010). The Lakewood Station District is also part of Lakewood's designated urban center under the *Vision 2040* plan (PSRC 2009).

**Lakewood Station District:** Once Sounder service reaches Lakewood in 2012, the station will act as the multi-modal commuter hub of Lakewood and the southern terminus of Sound Transit's commuter rail service. This district will provide a mixture of intensive land uses (office, retail and high density residential), a pedestrian-oriented urban environment, and activities supportive of regional transportation. The plan provides incentives to encourage urban growth over a period of time.

The applicable goals and policies of the Lakewood Comprehensive Plan are:

*GOAL LU-25: Promote the Lakewood Station area as the multi-modal commuter hub of Lakewood.*

- *LU-25.1 – Coordinate with affected agencies to facilitate the development and operation of the Lakewood Station area as a multi-modal commuter hub.*
- *LU-25.2 – Foster the Lakewood Station area's role as a transit-oriented development district.*
- *LU-25.3 – Seek ways to acquire additional public and semi-public open space including the creation of mechanisms for bonus densities in return for provision of open space and other public amenities.*
- *LU-25.4 – Provide incentives for redevelopment of the Lakewood Station area to capitalize on growth and visibility associated with the commuter rail station.*

*GOAL LU-26: Promote an interactive mixture of activities around the Lakewood Station that focus on the station's regional access.*

- *LU-26.1 – Coordinate and promote the development of the area around the Lakewood Station to create a distinctive urban node that provides for a rich mixture of uses including regional offices, major institutions, high-density urban residences, neighborhood businesses, and open space.*

*GOAL LU-27: Develop an urban design framework to guide physical development of the Lakewood Station district.*

- *LU-27.1 – As part of the Lakewood Station sub-area plan, develop design guides and a detailed urban design framework plan for the Lakewood Station District, coordinating public and private development opportunities (see GOAL UD-9).*

- *LU-27.2 – Prioritize completion of existing street grid to ensure connectivity throughout the Lakewood Station district.*
- *LU-27.3 – Create additional public and semi-public open space opportunities to serve residents, employees, commuters and visitors in the Lakewood Station district.*
- *LU-27.4 – Improve pedestrian and vehicular connections across the railroad tracks, Pacific Highway Southwest, and I-5.*

*GOAL UD-9: Create a livable, transit-oriented community within the Lakewood Station district through application of urban design principles.*

- *UD-9.1 – Provide for pedestrian and bicycle connectivity within the Lakewood Station district to the commuter rail station.*
- *UD-9.2 – Identify the opportunities for additional public/semi-public green space in the Lakewood Station district. (see Policy LU25.3 regarding bonus densities).*
- *UD-9.3 – Improve identified civic boulevards, gateways, and green streets within the Lakewood Station district to provide a unifying and distinctive character.*
- *UD-9.4 – Establish the intersection of Pacific Highway Southwest and Bridgeport Way as a major gateway into the city and develop a landscaping treatment to enhance the city’s image at this gateway.*
- *UD-9.5 – Develop a sub-area plan to serve as the framework plan for developing the Lakewood Station district. Incorporate site and architectural design measures to coordinate consistency of private and public development.*

Other changes envisioned within the Lakewood Station district include:

- the strengthening and completion of the street grid north of St. Clare Hospital and east of Bridgeport Way
- development of an open space corridor adjacent to the railroad tracks as part of a greater citywide system

Some of the specific urban design actions that may occur as the Lakewood Station district develops over the next 20 years are:

*Landmarks/Activity Nodes:* The Bridgeport Way intersection with I-5, the most visible access point into the city, would be redeveloped and landscaped into a graceful entrance on both sides of Pacific Highway SW. The commuter rail station and related architecture, including the garage structure, could present a memorable regional image, while simultaneously functioning to mediate the transition in scale between the station and the neighborhood to the north.

**Civic Boulevards:** Bridgeport Way, Pacific Highway SW, and 112th Street would receive various safety and image-oriented streetscape improvements, including landscaped medians, improved crosswalks, and undergrounding of utilities.

**Green Streets:** Several important pedestrian connections would be made along existing streets to increase pedestrian interest and safety, including curb ramps, street trees, crosswalks, and lighting.

**Transit-Oriented Commercial Zoning.** Following adoption of its comprehensive plan, Lakewood instituted new citywide zoning in 2001. The Lakewood Station District contains several different zoning districts. The Transit-Oriented Commercial (TOC) zoning district is specific to the station district and reflects the commercial corridor within that area. The intent of the zone is to create *“an interactive mixture of uses which focus on regional transportation networks while providing for urban design, people orientation, and connectivity between uses and transportation routes”* (LMC 18A.30.510). In addition to commercial uses, multifamily housing is also allowed within the zone at a density of 54 dwelling units per acre, as either a large, stand-alone development or combined with ground-floor commercial uses.

The area north of the tracks and south of St. Clare Hospital is zoned Multifamily 3, which also provides for density of up to 54 dwelling units per acre. It differs from the TOC provisions in that it allows smaller stand-alone developments and does not integrate ground-floor commercial uses. The area currently contains older, largely outdated multifamily housing which may be suited for redevelopment. PT is planning its local connection between the Lakewood Towne Center transit station and the Sounder station through this area. However, transit service implementation and redevelopment interest is impeded by the fact that the area is currently physically severed from the station by the tracks themselves.

**Non-Motorized Plan.** Lakewood adopted their Non-Motorized Transportation Plan in 2009 (City of Lakewood 2009a), which identifies specific Sounder station access improvements, including a new grade-separated crossing of the railroad at the Sounder station called the “Lakewood Connection”. The crossing will provide more direct pedestrian and bicycle connection from Lakewood’s downtown and central neighborhoods to the commuter rail station. Lakewood is in the process of developing designs for the project and is seeking federal and state funding assistance for construction.

## Origin and Destination

Twenty eight of the passengers who boarded at Lakewood Station were surveyed one morning during the first week of November 2010. Table 19 shows the city of origin for the passengers surveyed. These passengers alighted at Tacoma Dome Station.

**Table 19: Lakewood Passenger City of Origin**

City	Boardings	% of Boardings
Tacoma	7	25
Spanaway	2	7
Olympia/Lacey	6	21
DuPont	7	25
Lakewood	3	11
Other	3	11
<b>TOTAL</b>	<b>28</b>	<b>100</b>

## Station Area Access Mode/Rider Survey Information

No field data or observations were collected for the Lakewood Station because it is not currently open for Sounder service. The rider survey indicated that of the 28 passengers surveyed, 68% arrived by auto and parked at the station and 21% arrived by bus. Of these bus riders, half parked at the DuPont Park-and-Ride.

## Traffic Counts

The Pacific Highway SW/parking lot driveway intersection (see Figure 9) is signalized, and there is no southeast leg at the intersection. There are no traffic issues at this intersection in the morning peak hour (7:30 to 8:30 a.m.)

## Summary

- Currently, the station appears to be used by only a few drivers, based on a single mid-day observation of parking lot occupancy.
- Land use in the surrounding area is low density, but city plans and policies support an urban center with a higher intensity of mixed land uses (office, retail, multifamily residential).

## **Appendix A**

### **Acronyms**

## Acronyms

BNSF	Burlington Northern Santa Fe Railway
CTR	commute trip reduction
EIS	Environmental Impact Statement
GMA	Growth Management Act
GTEC	Growth and Transportation Efficiency Center
HOV	high occupancy vehicle
I-	Interstate
LIFT	Local Infrastructure Financing Tool
MIC	Manufacturing/Industrial Center
PSRC	Puget Sound Regional Council
PT	Pierce Transit
SR	State Route
ST	Sound Transit
TOC	Transit-Oriented Commercial
UGA	urban growth area
WUTC	Washington Utilities and Trade Commission



**Appendix B**  
**Sounder/Express Rider Survey**

**Appendix C**  
**Public Outreach and Open House Summary**

## **Appendix D**

### **Traffic Counts**

## **Appendix E**

### **References**

## References

- Central Puget Sound Regional Transit Authority (Sound Transit). 1996. *Sound Move*. May.
- Central Puget Sound Regional Transit Authority (Sound Transit). 2008. *Sound Transit 2 (ST2): A Guide for Mass Transit Expansion*. July.
- City of Kent. 1989. *City of Kent Downtown Plan*.
- City of Kent. 2004. *City of Kent Comprehensive Plan*.
- City of Kent, BRW, Langlow Associations, and MAKERS Architecture and Urban Design. 2005. *City of Kent Downtown Strategic Action Plan*. April 19.
- City of Kent and Nelson/Nygaard. 2007. *Transit Master Plan, City of Kent Transportation Plan*.
- City of Kent, Fehr & Peers, Nelson/Nygaard, Henderson, Young & Company, CH2M Hill, and The Transpo Group. 2008. *Transportation Master Plan Final Report (Street System, Non-motorized System, Transit System, Funding the plan, Implementing the Plan)*. June.
- City of Lakewood. 2010. *Comprehensive Plan*.
- City of Lakewood and The Transpo Group. 2009a. *Non-Motorized Transportation Plan*. June.
- City of Mukilteo. 1995. *Mukilteo Multimodal/Intermodal Terminal and Access Study and Final Programmatic EIS*. June.
- City of Mukilteo. 2010. *Comprehensive Plan*. October 18.
- City of Mukilteo and HBB Landscape Architecture. 2008. *Bicycle, Pedestrian and Trails Plan*. July 16.
- City of Mukilteo and MAKERS Architecture and Urban Design. 2009. *Downtown Business District Subarea Plan*. Final Draft. November.
- City of Puyallup. 1994. *Comprehensive Plan*.
- City of Puyallup. 2000. *Transportation Plan*.
- City of Sumner and The Transpo Group. 2004. *2004 Comprehensive Plan Update Transportation Analysis*. July.
- City of Sumner and Jongejan, Gerrard and McNeal. 2008. *Sumner Trail Master Plan*. June.
- City of Sumner. 2009. *Sumner Comprehensive Plan*. December.
- City of Tacoma. 2010. *City of Tacoma Comprehensive Plan*.

City of Tacoma and Alta Planning and Design. 2010. *City of Tacoma Mobility Master Plan*. February.

Puget Sound Regional Council (PSRC). 2009. *Vision 2040*. December.



**Appendix F**  
**Preparers and Reviewers**

## **Preparers**

### **URS Corporation**

Julie Blakeslee, AICP

Marissa Gifford

Nate Larson, PE

### **The Transpo Group, Inc.**

Bruce Haldors

Andy Mortensen

Adam Parast

### **Kittelson Associates**

Kathryn Coffel

### **The Fearey Group**

Sarah Haeger

Traci Paulk

Natalie Quick

## **Reviewers**

### **Sound Transit**

Val Batey

David Beal

Bob Harvey